REPORT

DATE: January 3, 2008

TO: Energy and Environment Committee

FROM: Jessica Kirchner, Senior Regional Planner, (213)236-1983, kirchner@scag.ca.gov

SUBJECT: 2008 Draft Program Environmental Impact Report for the Regional Transportation Plan

EXECUTIVE DIRECTOR'S APPROVAL:

RECOMMENDED ACTION:
Approve the release of the Draft 2008 Regional Transportation Plan Program Environmental Impact Report for a 45 day public review period.

BACKGROUND:
The California Environmental Quality Act (CEQA) requires SCAG to prepare a Program Environmental Impact Report (PEIR) for the Regional Transportation Plan (RTP). The PEIR must identify the probable significant effects of projects, programs and policies included in the 2008 RTP. As with all EIRs, CEQA requires the determination of significance be based on current conditions compared to future conditions with the Plan. Furthermore, the PEIR must evaluate a reasonable range of alternatives to the Plan that reduce environmental effects and must also include mitigation measures designed to minimize significant effects. The 2008 PEIR fulfills these requirements. In addition, the PEIR provides a regional-scale, programmatic environmental planning tool that will offer useful analysis for subsequent site specific analysis. The PEIR Executive Summary provides a broad overview of the PEIR and is attached for review.

The EEC is scheduled to approve the release of the Draft PEIR on January 3, 2008. The 45-day public comment period is scheduled to run concurrently with the RTP and end on February 18, 2008. A public hearing will be held at the next EEC meeting on February 7, 2008.

FISCAL IMPACT:
Funds for the development of the 2007 RTP PEIR are included in the FY 07/08 budget WBS 07-020.SCGC1.

Reviewed by:
Division Manager

Reviewed by:
Department Director

Reviewed by:
Chief Financial Officer

SOUTHERN CALIFORNIA ASSOCIATION of GOVERNMENTS

EXECUTIVE SUMMARY
Introduction

Purpose of the Environmental Impact Report

In accordance with the California Environmental Quality Act (CEQA) the Southern California Association of Governments (SCAG) has prepared this Program Environmental Impact Report (PEIR) for the 2008 Regional Transportation Plan (2008 RTP, Plan, or Project). The Plan addresses the transportation needs for the SCAG region through 2035 (including both specific projects and strategies that address transportation and urban form); the purpose of the 2008 PEIR is to identify the potentially significant environmental effects of implementing the projects, programs, and policies included in the Plan. The PEIR serves as an informational document to inform decision-makers and the public of the potential environmental consequences of approving the proposed 2008 RTP, and it includes feasible mitigation measures and alternatives designed to help avoid or minimize significant environmental effects. The PEIR includes a description of the existing regional environmental setting, a description of the proposed Project or action, a reasonable range of alternatives to the proposed Plan, analysis and identification of significant impacts of the Plan and the alternatives, identification of the environmentally superior alternative, areas of known controversy, mitigation measures, and the expected level of significance after mitigation.

The 2008 RTP PEIR fulfills the requirements of CEQA and provides a useful, regional-scale environmental planning tool that will support subsequent, site-specific analysis, and identifies appropriate measures to minimize adverse environmental effects in the SCAG region. Individual projects are preliminarily identified in the 2008 RTP; however, this PEIR is programmatic in nature and does not specifically analyze these projects. Project-level analyses will be prepared by implementing agencies on a project-by-project basis. Project specific planning and implementation undertaken by each implementing agency will depend on a number of issues, including: policies, programs and projects adopted at the local level; restrictions on federal, state and local transportation funds; the results of feasibility studies for particular corridors; and further environmental review of proposed projects.

Environmental Setting

The SCAG region is comprised of six counties: Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura and totals approximately 38,000 square miles in area. The region stretches from the borders of California/Nevada and California/Arizona to the Pacific Ocean and from the southernmost edge of the Central Valley to the Mexican border. The region includes the

county with the largest land area in the nation, San Bernardino County, as well as the county with the highest population in the nation, Los Angeles County. This vast region includes nearly 25 million acres of which approximately 2.1 million acres is developed land, nearly 20 million acres are vacant, and the balance is agriculture, open space, recreation and other uses. The region is home to a population of nearly 19 million people and is expected to grow to 24 million by 2035.

Proposed Action

SCAG is the federally designated Metropolitan Planning Organization under Title 23, United States Code (USC) 134(d)(1), for the six-county region. SCAG is required by state and federal mandates to prepare a Regional Transportation Plan (RTP) every four years.

The 2008 RTP is a long-range regional transportation plan that provides a blueprint to help achieve a coordinated and balanced regional transportation system. Transportation projects in the SCAG region must be consistent with the RTP in order to receive federal funding. The RTP includes a policy element with goals, policies, and performance indicators, an action element that identifies projects, programs and implementation. In addition, the RTP includes a description of regional growth trends to help identify future needs for travel and goods movement. The 2008 RTP consists of two sections: a financially constrained plan and a strategic plan. While the constrained plan includes projects that have committed, available, or reasonably available revenue sources, the strategic plan identifies additional projects that require study and consensus building before the decision can be made as to whether to commit the funding to include these projects in a future RTP's constrained plan.

Policy Element

The goals of the 2008 RTP have expanded from 2004 to encompass transportation security. These goals reflect the requirements of the United States Department of Transportation as identified in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). The goals are provided in Table ES-1 below in no particular order.

TABLE ES-1
RTP GOALS

RTP Goals
Maximize mobility and accessibility for all people and goods in the region
Ensure travel safety and reliability for all people and goods in the region
Preserve and ensure a sustainable regional transportation system
Maximize the security of our transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies
Maximize the productivity of our transportation system
Protect the environment, improve air quality and promote energy efficiency
Encourage land use and growth patterns that complement our transportation investments

SOURCE: Southern California Association of Governments, 2008 Regional Transportation Plan

The SCAG Regional Council adopted five policies to guide the development of the RTP (Table ES-2). These RTP policies, listed in Table ES-2 below, are unchanged since 2004 when the previous RTP was prepared by SCAG, and they emphasize the importance of tracking the Plan's performance through specific indicators.

TABLE ES-2
RTP POLICIES

1	Transportation investments shall be based on SCAG's adopted Regional Performance Indicators.
2	Ensuring safety, adequate maintenance, and efficiency of operations on the existing multi-modal transportation system will be RTP priorities and will be balanced against the need for system expansion investments.
3	RTP land-use and growth strategies that differ from currently expected trends will require a collaborative implementation program that identifies required actions and policies by all affected agencies and subregions.
4	HOV gap closures that significantly increase transit and rideshare usage will be supported and encouraged, subject to Policy No. 1.
5	Progress monitoring on all aspects of the Plan, including timely implementation of projects, programs, and strategies, will be an important and integral component of the Plan.

SOURCE: Southern California Association of Governments, 2008 Regional Transportation Plan

Performance indicators in the 2008 RTP include mobility, accessibility, reliability, safety, cost effectiveness, productivity, sustainability, preservation, environmental quality, and environmental justice.

Transportation Strategies

The programs, projects and implementation actions of the 2008 RTP focus on system management, transportation demand management, strategic expansion and the land use transportation connection.

Transportation Safety

The 2008 RTP details ten measures that SCAG, as a planning agency, will undertake to enhance the region's ability to achieve and sustain at risk target levels of capability to prevent, protect against, respond to and recover from major human caused or natural events in order to minimize the threat and impact to lives, property and the region. The 2008 RTP commits $10 billion for safety related projects and services. Furthermore, in 2005, SAFETEA-LU required that each state develop a Strategic Highway Safety Plan; the 2008 RTP is consistent with that plan, as required by federal law.

System Monitoring and Evaluation

System monitoring is the foundation of the transportation system and plays a large part in the 2008 RTP. As discussed above, SCAG has developed performance measures to track and monitor the progress of the transportation system so that the region can make informed decisions regarding transportation investments. These investments include detection, closed circuit television systems, bus global positioning systems, and automatic ridership counting systems. Although funding is modest for these activities, they lead to more informed decisions.

Travel Demand Management (TDM)

In an effort to address travel demand, TDM strategies are designed to influence an individual's travel behavior by making alternatives to the single-occupant automobile more attractive, especially during peak commute periods, or by enacting regulatory strategies. Some examples of TDM strategies are carpools and vanpools, public transit, non-motorized modes, congestion pricing, and providing the public with reliable and timely traveler information.

Increasing Rideshare (Carpool and Vanpool)

The SCAG region continues to invest heavily in High Occupancy Vehicle (HOV) infrastructure that provides incentives for commuters to share rides with others. While HOV utilization is growing over time, the percent of total travelers using carpools and vanpools is not. SCAG and its partners will strengthen their efforts to encourage this efficient mode of travel.

System Expansion Projects

More than half of the available transportation revenues in the region are dedicated to the completion and expansion of the region's people and goods movement transportation systems.

Highway Improvements

Major categories of highway improvements included in the Plan are HOV lanes and connectors, mixed flow (or general purpose) lanes, toll facilities and High Occupancy Toll (HOT) lanes, and strategic arterial improvements. A significant number of system expansion projects have already been committed through SCAG's Regional Transportation Improvement Program (RTIP) for the highway network. These priority projects close critical gaps in the system, relieve significant bottlenecks, and address inter-county travel needs.

HOV Gap Closures and Connectors

Southern California has invested heavily in HOV lanes, producing one of the nation's most comprehensive HOV networks and highest rideshare rates. The Plan includes many additional investments to extend the HOV network, strategically closes gaps in the HOV network, and constructs additional direct freeway-to-freeway connectors to maximize the overall system performance by minimizing weaving conflicts and maintaining travel speeds.

Mixed Flow

Mixed flow lanes carry more traffic than any other component of our transportation system; mixed-flow capacity enhancements are necessary to address traffic bottlenecks and relieve congestion on heavily traveled corridors. This is especially true in areas outside of the urban core where transit service and the HOV network are not fully developed. The 2008 RTP includes a variety of mixed flow lane additions, mostly outside of Los Angeles County.

Toll and High Occupancy Toll (HOT) Lane Corridors and Facilities

The 2008 RTP also includes an expansion of the existing HOT lane and toll road system in Orange County to address the congested commuter corridor between housing-rich Riverside County and job-rich Orange County. Additionally, improvements to several major corridors in other parts of the region are proposed to be financed by tolls, including the I-710 Tunnel Gap Closure and the High Desert Corridor.

Transit Strategies

The 2008 RTP recommends closing critical gaps in the transit system to improve service, and extend routes to serve a greater number of passengers. In addition, the coordination of development in and around transit stations and corridors, improved service reliability and performance, and a highly focused transit capital investment program appear to yield the best results within the budget limitations that the region faces.

Heavy and light rail projects are planned for Los Angeles County, while Orange County focuses on several new bus rapid transit (BRT) corridors. Riverside and San Bernardino Counties are planning a mix of new rail and BRT projects.

High-Speed Regional Transport

A High-Speed Regional Transport (HSRT) system has the potential for relieving both airport and freeway congestion in urbanized areas by providing an alternative to the automobile, as well as making less congested airports more accessible to air travelers, and providing alternative capacity for freight movement in the region.

Aviation

SCAG's Regional Aviation Decentralization Strategy is very similar to the 2030 decentralized regional aviation system adopted for the 2004 RTP. It respects all legally-enforceable policy and physical capacity constraints at urban airports. It also assumes much more willingness on the part of the airlines to invest in new flights at new and emerging airports, and a package of market and ground access incentives to promote decentralization at under-utilized suburban airports.

Goods Movement Strategies

To enable the region to handle the dramatic growth in the goods movement sector, the Plan calls for approximately $13 billion in freight rail investments, nearly $18 billion in a freight HSRT

system, and over $5 billion in highway investments. These investments integrate air quality mitigation into the goods movement system improvements, yielding substantial air quality benefits and reducing its current and long-term impacts on public health and the environment.

Dedicated Lanes for Clean Technology Trucks

The past several RTP updates have included the concept of dedicated truck facilities. The 2008 RTP continues to refine the concept of user-supported (toll) corridors to improve the flow of goods. More recent efforts have focused on adding dedicated truck lanes for clean technology vehicles along truck-intensive corridors in Southern California. Operationally, such a corridor would be aligned to connect freight-intensive locations such as the Ports, warehousing/distribution center locations, and manufacturing locations. These dedicated facilities would have fewer entrance/egress locations than typical urban interstates to smooth the flow of trucks.

Regional Freight Rail Investment and Emission Reduction Package

Freight rail investments consist of additional mainline capacity, grade separations, and locomotive engine upgrades. About half of the rail-related investments are for grade crossing separations, which reduce traffic congestion, improve safety, and reduce pollution. Substantial air quality benefits can be realized by accelerating fleet modernization with cleaner technologies.

Alternative Technology-Based Goods Movement/Logistics

Also being explored in the 2008 RTP are alternative technology-based systems that can provide greater throughput and reliability with fewer emissions than traditional rail (the emissions would be only those associated with electricity generation).

Environmental Justice

FHWA and the FTA have a commitment to assuring environmental justice in the programs they fund. Both of these federal agencies recently issued proposed revised planning regulations regarding environmental justice. This was done in part to comply with Title VI of the Civil Rights Act of 1964 and associated regulations and policies, including President Clinton's 1994 Executive Order 12898 on Environmental Justice. Generally these laws prohibit discrimination on the basis of race, income, age, or disability. In the transportation-planning context, SCAG seeks to assure that the plan benefits and burdens are not inequitably distributed within the region. A detailed analysis of the environmental justice analysis and methodology is contained in the Plan.

Proposed Plan and RTP PEIR Alternatives

The alternatives evaluated for the 2008 RTP PEIR include:

The **Proposed Plan**, which includes all of the elements summarized above, contains transportation/urban form strategies that encourage compact growth, increased jobs/housing balance, and centers based development where feasible, in all parts of the region.

The **No Project** Alternative includes only those programmed transportation projects that received federal environmental clearance by December 2006, projects in the first year of the 2006 RTIP and projects currently undergoing construction or right of way approval. These reasonably foreseeable projects fulfill the definition of the CEQA mandated "No Project Alternative."

The **2004 Modified RTP** Alternative is an update of the adopted 2004 RTP to reflect the most recent growth estimates and transportation planning decisions and assumptions. This alternative does not include urban form strategies included within SCAG's Compass Blueprint program to the extent included within the Plan.

The **Envision** Alternative builds on the enhanced density and ideas of the SCAG Compass Blueprint and described in the Plan and goes further. It includes far more aggressive densities than the Proposed Plan alternative and limits the development of single-family housing that would be built in the region.

Table ES-3 below contains a summary of the environmental impacts associated with implementation of the 2008 RTP and alternatives, proposed mitigation measures, the level of impacts with implementation of the mitigation measures.

Each alternative maintains a constant population total in 2035. The year 2035 growth projection for each Alternative differs from one another only in the distribution of people, households and jobs. The alternatives differ in terms of the distribution because the different transportation investments and urban form strategies that would be expected to support different regional distributions of population, households, and employment.

Analytical Approach

The focus of the environmental analysis in this PEIR is on the potential regional-scale and cumulative impacts of implementation of the Plan and the alternatives. The long-range planning horizon of more than 25 years necessitates that many of the highway, arterial, goods movement, and transit projects included in the 2008 RTP and the alternatives are identified at the conceptual level, and this document addresses environmental impacts to the level that they can be assessed without undue speculation. This PEIR acknowledges this uncertainty and incorporates these realities into the methodology to evaluate the environmental effects of the 2008 RTP, given its long-term planning horizon.

The proposed Plan and the alternatives were evaluated at an equal level of detail. Multiple methods, including spatial analysis, transportation, noise and air quality simulation modeling, and other quantitative, ordinal, and qualitative techniques, were employed to identify the potential environmental effects of implementing the Plan and the alternatives. Spatial analysis using Geographic Information Systems (GIS) was employed to evaluate the potential effects of the

major roadway, rail, and transit projects on numerous resource categories, such as land use, biological, cultural and water resources. Sophisticated transportation, noise and air quality simulation models were used to estimate the transportation and air quality impacts. Project and policy elements of the Plan and alternatives were incorporated into the modeling analysis and into the socioeconomics projections. All of the techniques used to evaluate the potential environmental effects of the Plan and the alternatives are fully described in each resource section in Chapter Three of this document.

Baseline for Determining Significance

The PEIR must identify significant impacts that would be expected to result from implementation of the 2008 RTP. Significant impacts are defined as a "substantial or potentially substantial, adverse change in the environment" (Public Resources Code §21068). Significant impacts must be determined by applying explicit significance criteria to compare the future Plan conditions to the existing environmental setting ((CEQA Guidelines §15126.2(a)). The existing setting is described in detail in each resource section of Chapter Three of this document, and represents the most recent, reliable, and representative data to describe current regional conditions. The criteria for determining significance are included in each resource section in Chapter Three of this document.

Comparison with the No Project

It is important to emphasize the urbanization in the SCAG region will increase substantially by 2035, with or without implementation of the 2008 RTP. This means that the impact assessment for many of the resource categories of the CEQA required environmental baseline (current conditions) of current conditions is cumulative in nature. Therefore, the analysis for each resource category also includes a direct comparison between the expected future conditions with the Plan and the expected future conditions if no Plan were adopted. This evaluation is not included in the determination of significant impacts; however, it provides a meaningful perspective on the effects of implementing the 2008 RTP. A direct comparison between the Plan and the No Project Alternative is included in each resource section of Chapter Three of this document.

Significant Impacts, Mitigation Measures, and Monitoring

As stated above, CEQA requires identification of significant impacts and mitigation measures to avoid or reduce significant impacts. **Table ES-3** below contains a summary of the environmental impacts associated with implementation of the 2008 RTP and RTP PEIR Alternatives, proposed mitigation measures, and the level of impacts with implementation of the mitigation measures. The table illustrates that substantial or potentially substantial adverse effects, compared to current conditions, would be expected to occur to:

- Land Use;
- Population, Employment, and Housing;
- Transportation;
- Air Quality;
- Noise;
- Visual/Aesthetic Resources;

- Open Space;
- Biological Resources;
- Cultural Resources;
- Geology;
- Hazardous Materials;
- Energy;
- Water Resources; and
- Public Service and Utilities.

The proposed mitigation measures included in Table ES-3 can be incorporated as policies into the Final 2008 RTP and SCAG's updated Regional Comprehensive Plan, as appropriate and feasible. This integration of mitigation with regional plans helps to ensure that feasible measures are implemented at the project-level (Public Resource Code §21081.6). The project proponent or local jurisdiction shall be responsible for ensuring adherence to the mitigation measures prior to construction. SCAG shall be provided with documentation of compliance with mitigation measures through SCAG's monitoring efforts, including SCAG's Intergovernmental Review Process (in which all regionally significant projects, plans, and programs are reviewed for consistency with regional plans and policies).

Areas of Known Controversy

Areas of known controversy about the 2008 RTP include concerns raised about growth projections, implementation of urban form strategies and mitigation measures, integration with SCAG's Regional Comprehensive Plan, water supply reliability, the transportation funding strategy, and reducing greenhouse gas (GHG) emissions from the transportation network.

Acronym List

The following represents frequently used acronyms contained within this document; a comprehensive glossary is included in Chapter 7:

CEQA	California Environmental Quality Act
GIS	Geographic Information Systems
GHG	Greenhouse Gas
HOV	High Occupancy Vehicle
HSRT	High Speed Regional Transport
LAX	Los Angeles Airport
MPH	Miles per Hour
MPO	Metropolitan Planning Organization
PEIR	Program Environmental Impact Report
Plan	2008 Regional Transportation Plan
PRC	Public Resources Code
RTP	Regional Transportation Plan
SCAG	Southern California Association of Governments
USC	United States Code

Table ES-3: 2008 RTP Impacts, Mitigation Measures and Comparison for Alternatives

IMPACT	MITIGATION MEASURES	2008 RTP SIGNIFICANCE AFTER MITIGATION	No Project	Modified 2004 RTP	Envision
As noted in Chapter 3.0, all mitigation measures should be included in project-level analysis as appropriate. The project proponent or local jurisdiction shall be responsible for ensuring adherence to the mitigation measures prior to construction. For regionally significant projects SCAG shall be provided with documentation of compliance with mitigation measures through its Intergovernmental Review Process in which all regionally significant projects, plans, and programs must be consistent with regional plans and policies.					
3.1 Aesthetics					
Impact 3.1-1: Construction and implementation of individual 2008 RTP projects could obstruct views of scenic resources or scenic vistas.	**MM-AV.1:** Prior to project approval, project implementation agencies shall implement design guidelines, local policies, and programs aimed at protecting views of scenic corridors and avoiding visual intrusions. Projects shall be designed to minimize contrasts in scale and massing between the project and surrounding natural forms and developments. Avoid, if possible, large cuts and fills when the visual environment (natural or urban) would be substantially disrupted. Site or design projects shall minimize their intrusion into important viewsheds and use contour grading to better match surrounding terrain. **MM-AV.2:** Prior to the issuance of permits, project implementation agencies shall require and projects shall, to the extent feasible, construct noise barriers of materials whose color and texture complements the surrounding landscape and development. Noise barriers shall be graffiti resistant and landscaped with plants that screen the barrier, preferably with either native vegetation or landscaping that complements the dominant landscaping of surrounding areas. Landscaping shall use natural landscaping to minimize contrasts between the project and surrounding areas. Wherever possible, interchanges and transit lines at the grade of the surrounding land shall limit view blockage. The edges of major cut and fill slopes shall be contoured to provide a more natural-looking finished profile.	It is likely there will be situations where visual impacts cannot be mitigated to a less than significant. Therefore, impacts to visual resources would remain **significant** after mitigation.	S-	S=	S=
Impact 3.1-2: Construction and implementation of projects in the 2008 RTP could potentially alter the appearance of scenic resources along or near designated scenic highways and vista points.	**MM-AV.3:** Project implementation agencies shall, where practicable and feasible, avoid construction of transportation facilities in state and locally designated scenic highways and/or vista points. **MM-AV.4:** Prior to project approval, project implementation agencies shall complete design studies for projects in designated or eligible Scenic Highway corridors and develop site-specific mitigation measures to minimize impacts on the quality of the views or visual experience that originally qualified the highway for scenic designation. **MM-AV.5:** If transportation facilities are constructed in state- and locally-designated scenic highways and/or vista points, design, construction, and operation of the transportation facility shall be	It is likely there will be situations where visual impacts cannot be mitigated to a less than significant. Therefore, impact to visual resources would remain **significant** after mitigation.	S-	S=	S=

Key:
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LTS = Less-than-Significant
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IMPACT	MITIGATION MEASURES		2008 RTP SIGNIFICANCE AFTER MITIGATION	No Project	Modified 2004 RTP	Envision
		consistent with applicable guidelines and regulations for the preservation of scenic resources along the designated scenic highway.				
Impact 3.1-3: Construction and implementation of projects included in the 2008 RTP could create significant contrasts with the overall visual character of the existing landscape setting or add urban visual elements to an existing natural, rural, and open space area.	**MM-AV.6:**	Project implementation agencies shall develop design guidelines for each type of transportation facility that make elements of proposed facilities visually compatible with surrounding areas. Visual design guidelines shall, at a minimum, include setback buffers, landscaping, color, texture, signage, and lighting criteria. The following methods shall be employed whenever possible: • Transportation systems shall be developed to be compatible with the surrounding environment (i.e., colors and materials of construction material). • Vegetation used as screening shall blend in and complement the natural landscape. • Trees bordering highways shall remain or be replaced so that clear-cutting is not evident. • Grading shall blend with the adjacent landforms and topography.	It is likely there will be situations where visual impacts cannot be mitigated to a less than significant. Therefore, impact to visual resources would remain **significant** after mitigation.	S-	S=	S-
	MM-AV.7:	Project implementation agencies shall design projects to minimize contrasts in scale and massing between the project and surrounding natural forms and development. Project implementation agencies shall design projects to minimize their intrusion into important viewsheds and use contour grading to better match surrounding terrain. To the maximum extent feasible, landscaping along highway corridors shall be designed to add significant natural elements and visual interest to soften the hard-edged, linear travel experience that would otherwise occur.				
	MM-AV.8:	Project implementation agencies shall use natural landscaping to minimize contrasts between the project and surrounding areas. Wherever possible, interchanges and transit lines shall be designed at the grade of the surrounding land to limit view blockage. Edges of major cut-and-fill slopes should be contoured to provide a more natural looking finished profile. Project implementation agencies shall replace and renew landscaping to the greatest extent possible along corridors with road widenings, interchange projects, and related improvements. New corridor landscaping shall be designed to respect existing natural and man-made features and to complement the dominant landscaping of surrounding areas.				
	MM AV.9:	Project implementation agencies shall construct sound walls of				

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	materials whose color and texture complements the surrounding landscape and development and to the maximum extent feasible, use color, texture, and alternating facades to "break up" large facades and provide visual interest. Where there is room, project sponsors shall landscape the sound walls with plants that screen the sound wall, preferably with either native vegetation or landscaping that complements the dominant landscaping of surrounding areas.				
Cumulative Impact 3.1-4: Urbanization in the SCAG region will increase substantially by 2035. The 2008 RTP influences the pattern of this urbanization, by increasing mobility and including land-use-transportation measures. At the regional scale, the 2008 RTP's contribution to impacts on the overall visual character of the existing landscape setting would be cumulatively significant.	Mitigation measures identified above (MM-AV.1 through MM-AV.9) for 2008 RTP projects should also be implemented as applicable to development projects throughout the region. **MM-AV.10:** In visually sensitive site areas and prior to project approval, local land use agencies shall apply development standards and guidelines to maintain compatibility with surrounding natural areas, including site coverage, building height and massing, building materials and color, landscaping, site grading, etc.	This impact would remain **significant** because the population growth projected by 2035 in combination with the projects in the 2008 RTP would consume approximately 2000,000 acres of land that is currently vacant resulting in contrasts with the overall visual character of the existing landscape setting.	S+	S+	S-
3.2 Air Quality					
Impact 3.2-1: Under the Plan, long-term emissions of PM10 and PM2.5 would increase substantially, when compared to existing conditions (2008). PM10 would increase in the SCAB, San Bernardino portion of MDAB and Imperial County portion of SSAB, and PM2.5 emissions would increase in the SCAB; PM10 would increase in Los Angeles, Orange, Riverside and San Bernardino Counties, PM2.5 would increase in Los Angeles and Riverside Counties, as a result of on-road mobile sources. The increase in regional emissions of PM10 and PM2.5 would be considered a significant cumulative impact. Emissions of ROG, NOx, CO, and SOx would decrease when compared to 2008; this would be a beneficial impact.	Emissions of particulate matter are directly related to growth and VMT. Regardless of how clean a vehicle operates, the vast majority of PM10 and PM2.5 emissions from on-road sources are generated from re-entrained dust on paved roads and is a function of the vehicle miles traveled. Mitigation measures that reduce VMT are proposed. Additional measures to control fugitive dust and transportation-related PM10 and PM2.5 are outlined in the 2007 Air Quality Management Plan (AQMP) and include control methods, such as watering, chemical stabilization, paving, revegetation, track-out control, construction project signage, sweeping and motor vehicle controls. Mitigation measures from the following air quality management plans are hereby incorporated by reference: • 2007 South Coast Air Quality Management Plan (AQMP) South Coast Air Quality Management District Mitigation	After implementation of all feasible mitigation measures and incorporation of measures as described above, the project and cumulative development would have a **significant** and unavoidable impact on regional air quality (PM10 and PM2.5).	S+	S=	S-

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IMPACT	MITIGATION MEASURES	2008 RTP SIGNIFICANCE AFTER MITIGATION	No Project	Modified 2004 RTP	Envision
	Measures and Control Efficiencies for the following: Off-road Engines On-road Engines Harbor Craft Ocean-going Vessels Locomotives Fugitive Dust • Mojave Desert Air Quality Management Plan • Antelope Valley Air Quality Management Plan • Imperial County Air Quality Management Plan **MM-AQ.1:** Pursuant to CAA Section 108(f)(1)(A), Transportation Control Measures (TCMs) from the 2007 AQMP include the following sixteen measures: I. Programs for improved use of public transit; II. Restriction of certain roads or lanes to, or construction of such roads or lanes for use by, passenger buses or high occupancy vehicles; III. Employer-based transportation management plans, including incentives; IV. Trip-reduction ordinances; V. Traffic flow improvement programs that achieve emission reductions; VI. Fringe and transportation corridor parking facilities, serving multiple occupancy vehicle programs or transit service; VII. Programs to limit or restrict vehicle use in downtown areas or other areas of emission concentration, particularly during periods of peak use; VIII. Programs for the provision of all forms of high-occupancy, shared-ride services, such as the pooled use of vans; IX. Programs to limit portions of road surfaces or certain sections of the metropolitan area to the use of non-motorized vehicles or pedestrian use, both as to time and place; X. Programs for secure bicycle storage facilities and other facilities, including bicycle lanes, for the convenience and protection of bicyclists, in both public and private areas;				

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	XI. Programs to control extended idling of vehicles; XII. Programs to reduce motor vehicle emissions, consistent with Title II of the Clean Air Act, which are caused by extreme cold start conditions; XIII. Employer-sponsored programs to permit flexible work schedules; XIV. Programs and ordinances to facilitate non-automobile travel, provision and utilization of mass transit, and to generally reduce the need for single-occupant vehicle travel, as part of transportation planning and development efforts of a locality, including programs and ordinances applicable to new shopping centers, special events, and other centers of vehicle activity; XV. Programs for new construction and major reconstruction of paths, tracks or areas solely for the use by pedestrian or other non-motorized means of transportation, when economically feasible and in the public interest; and XVI. Programs to encourage the voluntary removal from use and the marketplace of pre- 1980 model year light duty vehicles and pre-1980 model light duty trucks. The 2008 RTP has been prepared to facilitate implementation of the transportation control measures outlined in the 2007 AQMP. The 2008 RTP incorporates both the capital and noncapital improvements recommended by the AQMP. **MM-AQ.2:** ARB has adopted a series of measures designed to attain federal air quality standards for PM2.5 and 8-hour ozone. ARB's strategy, outlined in the South Coast SIP, includes the following elements: ▪ Set technology forcing new engine standards; ▪ Reduce emissions from the in-use fleet; ▪ Require clean fuels, and reduce petroleum dependency; ▪ Work with US EPA to reduce emissions from federal and state sources; and ▪ Pursue long-term advanced technology measures. Proposed new transportation–related SIP measures include: *On-road Sources* • Improvements and Enhancements to California's Smog Check Program • Expanded Passenger Vehicle Retirement • Modifications to Reformulated Gasoline Program				

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	• Cleaner In-Use Heavy-Duty Trucks • Ship Auxiliary Engine Cold Ironing and Other Clean Technology • Cleaner Ship Main Engines and Fuel • Port Truck Modernization • Accelerated Introduction of Cleaner Line-Haul Locomotives • Clean Up Existing Commercial Harbor Craft *Off-road Sources* • Construction and Other Equipment • Cleaner In-Use Off-Road Equipment • Agricultural Equipment Fleet Modernization • New Emission Standards for Recreational Boats • Off-Road Recreational Vehicle Expanded Emission Standards.				
Impact 3.2-2: Long-term (operational) localized impacts resulting from freeway operations under the Plan would be reduced compared to today but would likely continue to exceed the project specific locally acceptable cancer risk threshold of one in one million. The cumulative impact is beneficial. The continuation of a pre-existing problem is not an impact of the plan or cumulative development.	Same mitigation measures as Impact 3.2-1.	Although toxic air contaminant concentrations at sensitive receptors located closest to regional freeways would remain above acceptable levels they would be significantly reduced compared to today, therefore the impact of the 2008 RTP and cumulative development would be **less than significant.**	LTS	LTS	LTS
Impact 3.2-3: Emissions of short-term criteria pollutants would increase under the Plan as a result of construction of Plan projects and associated development in the region.	Mitigation measures include the mitigation measures included in Impact 3.2-1. Also, compliance with AQMD Rule 403 (Fugitive Dust) will reduce emissions of fugitive dust from construction activities. In addition, the following air quality mitigation measures sets forth a program of air pollution control strategies designed to reduce the project's air quality impacts from construction activities. ***Land Clearing/Earth-Moving:*** **MM–AQ.3:** Apply water or dust suppressants to exposed earth surfaces to control emissions.	After implementation of all feasible mitigation measures and incorporation of project features as described above, activities related to construction of RTP Plan projects, as well as associated	S-	S=	S=

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	MM-AQ.4: All excavating and grading activities shall cease during second stage smog alerts and periods of high winds. **MM-AQ.5:** All trucks hauling dirt, sand, soil, or other loose materials off-site shall be covered or wetted or shall maintain at least two feet of freeboard (i.e., minimum vertical distance between the top of the load and the top of the trailer). ***Paved Surfaces:*** **MM-AQ.6:** All construction roads that have high traffic volumes, shall be surfaced with base material or decomposed granite, or shall be paved or otherwise be stabilized. **MM-AQ.7:** Public streets shall be cleaned, swept or scraped at frequent intervals or at least three times a week if visible soil material has been carried onto adjacent public roads. **MM-AQ.8:** Construction equipment shall be visually inspected prior to leaving the site and loose dirt shall be washed off with wheel washers as necessary. ***Unpaved Surfaces:*** **MM-AQ.9:** Water or non-toxic soil stabilizers shall be applied as needed to reduce off-site transport of fugitive dust from all unpaved staging areas and other unpaved surfaces. **MM-AQ.10:** Traffic speeds on all unpaved surfaces shall not exceed 25 mph. ***Other Construction Mitigation Measures*** **MM-AQ.11.** Low sulfur or other alternative fuels shall be used in construction equipment where feasible. **MM-AQ.12:** Deliveries related to construction activities that affect traffic flow shall be scheduled during off-peak hours (e.g. 10:00 A.M. and 3:00 P.M.) and coordinated to achieve consolidated truck trips. When the movement of construction materials and/or equipment impacts traffic flow, temporary traffic control shall be provided to improve traffic flow (e.g., flag person). **MM-AQ.13:** To the extent possible, construction activity shall utilize electricity from power poles rather than temporary diesel power generators and/or gasoline power generators. **MM-AQ.14:** Revegetate exposed earth surfaces following construction.	regional growth would exceed emission thresholds for regional NOx, CO, PM10, SO2, and ROG. Therefore, construction of the 2008 RTP projects and associated growth would have a **significant** and unavoidable impact on regional air quality.			
Cumulative Impact 3.2-4: Cumulative development would result in on-road emissions discussed in previous impacts as well as train, airplane, ship and stationary and area sources of emissions. All	Mitigation measures for Impact 3.2-1 would also address this imapact.	After implementation of all feasible mitigation measures the region is	LTS	LTS	LTS

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emissions are anticipated to be consistent with applicable AQMPs and SIPs and within regional conformity emission budgets. Thus, consistency with applicable plans would be a **less than significant** impact. Nonetheless, such cumulative increases in emissions would be **significant.**		anticipated to be able to meet applicable conformity budgets. Thus the impact of consistency with applicable plans would be **less than significant.** Nonetheless, the level of increase in emissions anticipated for the region is considered to be **cumulatively significant** for all pollutants except NOx.	S=	S=	S=
Impact 3.2-5: The 2008 RTP would result in increased trips and VMT as well as increased growth in the region compared to today, resulting in increases in Greenhouse Gas (GHG) emissions.	GHG emissions are generally associated with the combustion of fossil fuel to power motor vehicles and provide energy. As such, the most effective way to reduce GHG emissions is to reduce energy use and associated fossil fuel combustion. The RTP PEIR Energy Section provides a comprehensive list of mitigation measures that would reduce fossil fuel combustion in the SCAG region. Additional measures are as follows: **MM-AQ.15:** Project sponsors should, where feasible, implement policies for sustainable airport development, management and airfield design to reduce air pollution and GHG emissions from operations, including cargo operations, ground support and access to and from airports (see Los Angeles World Airports Sustainability Vision and Principles and the Green LA Action Plan). **MM.AQ-16:** Project sponsors should, where feasible, implement a green construction policy that could include: • Ensuring that all off-road construction vehicles should be alternative fuel vehicles, or diesel powered vehicles with Tier 3 or better engines or retrofitted/repowered -to meet equivalent emissions standards as Tier 3 engines; • Using the minimum feasible amount of GHG emitting construction materials; • Using cement blended with the maximum feasible amount	The degree to which the proposed energy mitigation measures will be implemented is difficult to estimate. Improvements in air pollutant emission standards and increased use of alternative fuels would reduce GHG emissions. However, it is unlikely that mitigation measures would reduce GHG emissions below existing conditions (let alone to 1990 levels as required by AB 32) due to anticipated population growth.	S+	S=	S-

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	of flyash or other materials that reduce GHG emissions • Using asphalt with light colored additives and chemical additives that increase reflectivity and therefore reduce contribution to the heat island effect • Requiring recycling of construction debris to maximum extent feasible • Incorporating planting of shade trees into construction projects where feasible **MM.AQ-17:** Local governments should set specific limits on idling time for commercial vehicles, including delivery and construction vehicles.	As such, the RTP would result in a **significant** and unavoidable global warming impact.			
3.3 Biological Resources					
Impact 3.3-1: Transportation projects included in the 2008 RTP on previously undisturbed land could displace natural vegetation, and thus habitat, some of which is utilized by sensitive species in the SCAG region.	**MM-BIO.1:** Each transportation project shall assess displacement of habitat due to removal of native vegetation during route planning. Routes shall be planned in order to avoid and/or minimize removal of native vegetation. **MM-BIO.2:** When avoidance of native vegetation removal is not possible, each transportation project shall replant disturbed areas with commensurate native vegetation of high habitat value adjacent to the project (i.e. as opposed to ornamental vegetation with relatively less habitat value). **MM-BIO.3:** Individual transportation projects shall include offsite habitat enhancement or restoration to compensate for unavoidable habitat losses from the project site. **MM-BIO-4:** Pre-construction special status species surveys shall be conducted by a qualified biologist to verify presence or absence of species at risk. Species surveys should occur during the portion of the species' life cycle where the species is most likely to be identified within the appropriate habitat. In all cases, impacts on special status species and/or their habitat shall be avoided during construction to the extent feasible. **MM-BIO.5:** A Worker Awareness Program (environmental education) shall be developed and implemented to inform project workers of their responsibilities in regards to avoiding and minimizing impacts on sensitive biological resources. **MM-BIO.6:** An Environmental Inspector shall be appointed to serve as a contact for issues that may arise concerning implementation of mitigation measures, and to document and report on adherence	Although many measures can be employed to minimize the impacts to habitat due to vegetation removal, for a regional plan of this scale, the impact remains **significant.**	S-	S-	S=

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	to these measures.				
	MM-BIO.7: A qualified wetland scientist shall review construction drawings as part of each project-specific environmental analysis to determine whether wetlands will be impacted, and if necessary perfor a formal wetland delineation. Appropriate state and federal permits shall be obtained, but each project EIR will contain language clearly stating the provisions of such permits, including avoidance measures, restoration procedures, and in the case of permanent impacts compensatory creation or enhancement measures to ensure a no net loss of wetland extent or function and values.				
	MM-BIO.8: Sensitive habitats (native vegetative communities identified as rare and/or sensitive by the CDFG) and special-status plant species (including vernal pools) impacted by projects shall be restored and augmented, if impacts are temporary, at a 1.1: 1 ratio (compensation acres to impacted acres). Permanent impacts shall be compensated for by creating or restoring habitats at a 3:1 ratio as close as possible to the site of the impact.				
	MM-BIO.9: When work is conducted in identified sensitive habitat areas and/or areas of intact native vegetation, construction protocols shall require the salvage of perennial plants and the salvage and stockpile of topsoil (the surface material from 6 to 12 inches deep) and shall be used in restoring native vegetation to all areas of temporary disturbance within the project area.				
	MM-BIO.10: If specific project area trees are designated as "Landmark Trees" or "Heritage Trees", then approval for removals shall be obtained through the appropriate entity, and appropriate mitigation measures shall be developed at that time, to ensure that the trees are replaced. Due to the close proximity of these areas to sensitive wildlife habitats, all mitigation trees will use only locally-collected native species.				
	MM-BIO.11: Suitable habitat for listed vernal pool crustaceans shall be avoided to the extent feasible. If infeasible, impacts shall be mitigated in accordance with the Programmatic Biological Opinion (PBO) for vernal pool invertebrates, issued by the USFWS Sacramento Field Office in 1995. Surveys shall be conducted, with USFWS approval, in accordance with the 1996 *Interim Survey Guidelines to Permittees for Recovery Permits under* Section 10(a)(1)(A) *of the Endangered Species Act for the Listed Vernal Pool Branchiopods,* to establish whether or not listed invertebrates are present.				

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	Mitigation for occupied habitat impacted is likely to be compensatory off-site acquisition or protection of similar habitats at a ratio of 3:1 (compensation acres to that impacted) or other similar ratio with the approval of the USFWS. **MM-BIO.12:** Projects within the range and within suitable habitat for the arroyo toad shall conduct surveys, with USFWS approval, in accordance with the 1999 USFWS *Survey Protocol For The Arroyo Toad,* to establish whether or not the species is present. If species is determined present then the following applies: Mitigation for occupied habitat impacted is likely to be compensatory off-site acquisition or protection of similar habitats at a ratio of 3:1 (compensation acres to that impacted)) or other similar ratio with the approval of the USFWS and/or CDFG). **MM-BIO.13:** Projects within the range and within suitable habitat for the blunt-nosed leopard lizard shall conduct surveys, with USFWS approval, in accordance with the 2004 CDFG *Approved Survey Methodology For The Blunt-Nosed Leopard Lizard,* to establish whether or not the species is present. If species is determined present then the following applies: Mitigation for occupied habitat impacted is likely to be compensatory off-site acquisition or protection of similar habitats at a ratio of 3:1 (compensation acres to that impacted) or other similar ratio with the approval of the USFWS and/or CDFG). No direct taking of the blunt-nosed leopard lizard shall occur as this is a CDFG fully protected species with no regulatory mechanism to authorize direct taking (killing) of individuals. **MM-BIO.14:** Projects within the range and within suitable habitat for the California red-legged frog shall implement the measures detailed in the Programmatic Biological Opinion (PBO) for construction impacts to the red-legged frog that was issued by the USFWS (Federal Register 1999) to the USACE. The measures listed below are taken largely from the PBO and, if applied to the western pond turtle as well as the frog, would be adequate as standard mitigation for both species. A similar level of effort for survey protocol can also be applied to the Mountain yellow-legged frog, with adjustments to its climate, habitat, and breeding requirements. • The name and credentials of a biologist qualified to act as a construction monitor will be submitted to USFWS for approval at least 15 days prior to commencement of work; • The USFWS-approved biologist shall survey the site two weeks prior to the onset of work activities and immediately				

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	prior to commencing work. If red-legged frog adults, tadpoles, or eggs are found, the approved biologist shall contact USFWS to determine whether relocating any life stages is appropriate; • The USFWS-approved biologist shall ensure that the introduction or spread of invasive exotic plant species is avoided to the maximum extent possible, by removing weeds from areas of exposed bare soil within the construction zone where construction occurs in riparian vegetation. • The number and size of access routes, staging areas, and total area of activity shall be limited to the minimum necessary to achieve the project goal; • If work sites require dewatering, the intakes shall be screened with a maximum mesh sizes of 5 millimeters; • The USFWS-approved biologist shall permanently remove and destroy from within the project area any individuals of exotic species, such as bullfrogs, crayfish, and centrarchid fishes, to the maximum extent practicable. **MM-BIO.15:** Projects within the range and within suitable habitat for the California tiger salamander shall conduct surveys, with USFWS approval, in accordance with the 2003 USFWS *Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander,* to establish whether or not the species is present. In addition to measures described for the California red-legged frog, which would also serve to protect the California tiger salamander, the following measures shall be implemented to further minimize adverse effects to the California tiger salamander. • A pre-construction survey shall be conducted at each site to identify suitable pond and upland burrow aestivation areas. As feasible within the context of the work area, aestivation areas shall be temporarily fenced and avoided. • At locations where upland aestivation habitat is identified and cannot be avoided, aestivation burrows shall be excavated by hand prior to construction and individual animals moved to natural burrows or artificial burrows constructed of PVC pipe within 0.25 miles of the construction site as approved by the USFWS. • To ensure compliance with these measures and minimize				

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	California tiger salamander take, a qualified biological monitor shall be present during all new site disturbance construction activities (vegetation removal, clearing, grubbing, grading) at locations with suitable upland aestivation habitat. • Impacts on breeding ponds shall be avoided until the ponds have dried. • Upon approval by the USFWS, preconstruction surveys to salvage and relocate individual California tiger salamanders shall include installation of drift fences and pitfall traps within construction sites to identify and relocate animals. Following removal of individuals, construction areas shall be fenced with temporary exclusionary silt fencing. • Temporary impacts on upland aestivation habitat shall be restored to grassland habitat. • Mitigation for occupied habitat permanently impacted is likely to be compensatory off-site acquisition or protection of similar habitats at a ratio of 3:1 (compensation acres to that impacted) or other similar ratio with the approval of the USFWS and/or CDFG). **MM-BIO.16:** Projects within the range and within suitable habitat for the Coachella Valley fringe-toed lizard shall conduct surveys, with USFWS/CDFG approval, in accordance with the CDFG *Protocol for Determining Coachella Valley Fringe-Toed Lizard (CVFTL) Presence,* to establish whether or not the species is present. The measures listed below are taken largely from the CDFG protocol recommendations and would be adequate as standard mitigation for this species. If the species is determined present then the following applies: Mitigation for occupied habitat impacted is likely to be compensatory off-site acquisition or protection of similar habitats at a ratio of 3:1 (compensation acres to that impacted) or other similar ratio with the approval of the USFWS and/or CDFG). **MM-BIO.17:** Projects within the range and within suitable habitat for the desert tortoise shall conduct surveys, with USFWS approval, in accordance with the 1992 USFWS *Field Survey Protocol For Any Federal Action That May Occur Within The Range Of The Desert Tortoise,* to establish whether or not the species is present. If the species is determined present then the following				

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	applies: • Upon approval by the USFWS, preconstruction surveys of project impact areas shall be required to salvage and relocate individual desert tortoise out of harms. Following removal of individuals, construction areas shall be fenced with temporary exclusionary silt fencing. Mitigation for occupied habitat impacted is likely to be compensatory acquisition of mitigation credits or off-site acquisition or protection of similar habitats at a ratio of 3:1 (compensation acres to that impacted) or other similar ratio with the approval of the USFWS and/or CDFG). **MM- BIO.18:** The two-striped garter snake is not formally listed but considered a special-status species worthy of measures to avoid and minimize impacts to the extent feasible. Projects within the range and within suitable habitat for the two-striped garter snake shall conduct surveys in accordance with the best professional judgment of a qualified biologist. Preconstruction surveys of project impact areas shall be required to salvage and relocate individual two-striped garter snakes out of harms. Following removal of individuals, construction areas shall be fenced with temporary exclusionary silt fencing. **MM-BIO.19:** To avoid disrupting nesting Swainson's hawks, construction activities at known nesting locations shall occur between September and March outside the nesting season (nesting typically occurs from March 1 through September 1). Alternatively, if construction activities take place during the nesting season, a qualified biologist shall conduct a pre-construction survey no more than two weeks before the start of construction for any given milepost and report whether or not there are nesting Swainson's hawks within 500 feet of any project (assuming available authorized access). If there are nesting Swainson's hawks present within the 500-foot buffer areas, construction will be delayed until the CDFG has been consulted to determine suitable avoidance measures. A potential avoidance measure may include delaying all construction activity within 500 feet of an active Swainson's hawk nest until the adult and/or young of the year are no longer reliant on the nest site for survival as determined by a qualified biologist. **MM-BIO.20:** No more than two weeks before construction in any given milepost, a survey for burrows and burrowing owls shall be conducted by a qualified biologist within 500 feet of the project				

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	(assuming available authorized access). The survey will conform to the protocol described by the California Burrowing Owl Consortium (1993) which includes up to four surveys on different dates if there are suitable burrows present. If occupied burrowing owl dens are found within the survey area, a determination shall be made by a qualified biologist in consultation with CDFG whether or not project work will impact the occupied burrows or disrupt reproductive behavior. • If it is determined that construction will not impact occupied burrows or disrupt breeding behavior, construction will proceed without any restriction or mitigation measures. • If it is determined that construction will impact occupied burrows during August through February, the subject owls will be passively relocated from the occupied burrow(s) using one-way doors. There shall be at least two unoccupied burrows suitable for burrowing owls within 300 feet of the occupied burrow before one-way doors are installed. Artificial burrows shall be in place at least one-week before one-way doors are installed on occupied burrows. One-way doors will be in place for a minimum of 48 hours before burrows are excavated. • If it is determined that construction will physically impact occupied burrows or disrupt reproductive behavior during the nesting season (March through July) then avoidance is the only mitigation available. Construction shall be delayed within 300 feet of occupied burrows until it is determined that the subject owls are not nesting or until a qualified biologist determines that juvenile owls are self-sufficient or are no longer reliant on the natal burrow as their primary source of shelter and survival.				
	MM-BIO.21: When working within 100 feet of salt or brackish marshland presence for the California black rail, California clapper rail, and Yuma clapper rail shall be assumed for either species during the period February 1- August 31 and construction shall be scheduled to begin no earlier than September 1 and end no later than January 31 to avoid potential impact on reproduction.				
	MM-BIO.22: Projects within the range and within suitable habitat for the coastal California gnatcatcher shall conduct surveys, with				

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		USFWS approval, in accordance with the 1997 USFWS *Coastal California Gnatcatcher Presence/Absence Survey Guidelines,* to establish whether or not the species is present. If the species is determined present then the following applies: To avoid disrupting nesting coastal California gnatcatchers, construction activities at known nesting locations shall occur between September and March outside the nesting season (nesting typically occurs from March 1 through September 1). Alternatively, if construction activities take place during the nesting season, a qualified biologist shall conduct a pre-construction survey no more than two weeks before the start of construction for any given milepost and report whether or not there are nesting coastal California gnatcatchers within 500 feet of any project (assuming available authorized access). If there are nesting coastal California gnatcatchers present within the 500-foot buffer areas, construction will be delayed until the USFWS and/or CDFG has been consulted to determine suitable avoidance measures. A potential avoidance measure may include delaying all construction activity within 500 feet of an active coastal California gnatcatchers nest until the adults and/or young of the year are no longer reliant on the nest site for survival as determined by a qualified biologist. Mitigation for occupied habitat impacted is likely to be compensatory off-site acquisition or protection of similar habitats at a ratio of 3:1 (compensation acres to that impacted) or other similar ratio with the approval of the USFWS and/or CDFG).				
	MM-BIO.23:	Projects within the range and within suitable habitat for the least Bell's vireo shall conduct surveys, with USFWS approval, in accordance with the 2001 USFWS *Least Bell's Vireo Survey Guidelines;* to establish whether or not the species is present. If the species is determined present then the following applies: To avoid disrupting nesting least Bell's vireo, construction activities at known nesting locations shall occur between September and March outside the nesting season (nesting typically occurs from March 1 through September 1). Alternatively, if construction activities take place during the nesting season, a qualified biologist shall conduct a pre-construction survey no more than two weeks before the start of construction for any given milepost and report whether or not there are nesting least Bell's vireo within 500 feet of any project (assuming available authorized access). If there are				

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		nesting least Bell's vireo present within the 500-foot buffer areas, construction will be delayed until the CDFG has been consulted to determine suitable avoidance measures. A potential avoidance measure may include delaying all construction activity within 500 feet of an active least Bell's vireo nest until the adults and/or young of the year are no longer reliant on the nest site for survival as determined by a qualified biologist Mitigation for occupied habitat impacted is likely to be compensatory off-site acquisition or protection of similar habitats at a ratio of 3:1 (compensation acres to that impacted or other similar ratio with the approval of the USFWS and/or CDFG).				
	MM-BIO.24:	Projects within the range and within suitable habitat for the southwestern willow flycatcher shall conduct surveys, with USFWS approval, in accordance with the 2000 USFWS *Southwestern Willow Flycatcher Protocol Survey Guidelines (Revision 2000),* to establish whether or not the species is present. If the species is determined present then the following applies: To avoid disrupting nesting southwestern willow flycatcher, construction activities at known nesting locations shall occur between September and March outside the nesting season (nesting typically occurs from March 1 through September 15). Alternatively, if construction activities take place during the nesting season, a qualified biologist shall conduct a pre-construction survey no more than two weeks before the start of construction for any given milepost and report whether or not there are nesting southwestern willow flycatcher within 500 feet of any project (assuming available authorized access). If there are nesting southwestern willow flycatchers present within the 500-foot buffer areas, construction will be delayed until the CDFG has been consulted to determine suitable avoidance measures. A potential avoidance measure may include delaying all construction activity within 500 feet of an active southwestern willow flycatcher nest until the adults and/or young of the year are no longer reliant on the nest site for survival as determined by a qualified biologist Mitigation for occupied habitat impacted is likely to be compensatory off-site acquisition or protection of similar habitats at a ratio of 3:1 (compensation acres to that impacted) or other similar ratio with the approval of the USFWS and/or				

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		CDFG).				
	MM BIO-25:	Trees with unoccupied raptor nests (large stick nests or cavities) shall only be removed prior to March 1, or following the nesting season. A survey to identify active raptor nests shall be conducted by a qualified biologist no more than two weeks before the start of construction at project sites from March 1 through July 30. Active raptor nests shall be located within 500 feet of the project to the extent feasible and assuming available authorized access. • If an active raptor nest is found within 500 feet of the project a determination shall be made by a qualified biologist in consultation with CDFG whether or not project construction work will impact the active nest or disrupt reproductive behavior. • If it is determined that construction will not impact an active nest or disrupt breeding behavior, construction will proceed without any restriction or mitigation measure. If it is determined that construction will impact an active raptor nest or disrupt reproductive behavior then avoidance is the only mitigation available. Construction shall be delayed within 300 feet of such a nest, or as determined by CDFG, until the adults and/or young of the year are no longer reliant on the nest site for survival as determined by a qualified biologist.				
Impact 3.3-2: The 2008 RTP would potentially contribute to the fragmentation of existing habitat, decreasing habitat patch sizes, reducing habitat connectivity, and causing direct injury to wildlife. The 2008 RTP includes new transportation corridors that may form barriers to animal migration or foraging routes.	**MM BIO-26:**	Individual transportation projects included in the 2008 RTP shall conduct site-specific analyses of opportunities to preserve or improve habitat linkages with areas on and off-site. Mitigation banking (opportunities to purchase, maintain, and/or restore offsite habitat) is one opportunity that project proponents and jurisdictions may pursue.	Route planning to minimize habitat fragmentation impacts, wildlife crossings, on- and off-site habitat restoration and linkages would all reduce the impacts of habitat fragmentation, isolation, and direct injury to wildlife due to transportation projects. For some species, implementation of	S-	S=	S=
	MM BIO-27:	Each transportation project shall provide wildlife crossings/access at locations useful and appropriate for the species of concern.				
	MM BIO-28:	Individual transportation projects shall include analysis of wildlife corridors during project planning. Impacts to these corridors shall be avoided and/or minimized.				
	MM BIO-29:	Each transportation project included in the Plan shall use wildlife fencing where appropriate to minimize the probability of wildlife injury due to direct interaction between wildlife and roads. Inclusion of this mitigation measure shall be considered				

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		on a case-by-case basis, as use of wildlife fencing could further increase the effects of habitat fragmentation and isolation for many species.	mitigation measures could also increase the degree of habitat fragmentation. At a regional scale, the fragmentation of habitat due to the large scale of the 2008 RTP would not be fully avoided or mitigated. The impact would remain **significant.**			
Impact 3.3-3: The 2008 RTP includes new transportation facilities that could increase near-road human disturbances such as litter, trampling, light pollution and road noise in previously relatively inaccessible and undisturbed natural areas.	**MM BIO-30:** **MM BIO-31:** **MM BIO-32:**	Individual transportation projects shall minimize vehicular accessibility to areas beyond the actual transportation surface. This can be accomplished through fencing and signage. Each project shall establish litter control programs in appropriate areas, such as trash receptacles at road turnouts and viewpoints. Each project shall use road noise minimization methods, such as brush and tree planting, at heavy noise-producing transportation areas that might affect wildlife. Native vegetation should be used.	In many cases, the mitigation measures outlined above would avoid or minimize impacts to wildlife. However, at the regional scale, additional transportation projects would increase wildlife disturbance and the impact would remain **significant.**	S-	S=	S=
Impact 3.3-4: The 2008 RTP projects would potentially damage natural vegetation and other habitat components as a result of trampling or off-road machinery during the construction phases for these projects. Direct fatalities to wildlife would also potentially occur.	**MM BIO-33:** **MM BIO-34:** **MM BIO-35:** **MM BIO-36:**	Each project shall be preceded by pre-construction monitoring to ensure no sensitive species' habitat would be unnecessarily destroyed (also see **BIO-4** through **BIO-10**). All discovered sensitive species habitat shall be avoided where feasible, or disturbance shall be minimized. Each project shall schedule work to avoid critical life stages (e.g. nesting) of species of concern. Each project shall fence and/or mark sensitive habitat to prevent unnecessary machinery or foot traffic during construction activities. When removal and/or damage to sensitive species habitat are unavoidable during construction, each project shall replant any disturbed natural areas with appropriate native vegetation following the completion of construction activities. In the case	Full implementation of each of these mitigation measures would avoid and/or minimize the construction impacts to **less than significant** levels.	LTS	LTS	LTS

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		of permanent losses to sensitive species habitat, mitigation shall also follow the offsite habitat compensation guidance (also see **BIO-4** through **BIO-25**)				
Impact 3.3-5: The 2008 RTP projects would potentially create noise, smoke, lights and/or other disturbances to biological resources during construction phases for these projects.	**MM BIO-37:**	Individual projects shall avoid and/or minimize construction activities that have the potential to expose species to noise, smoke, or other disturbances. Pre-construction surveys shall be conducted as appropriate to determine the presence of any species that would need to be protected from such an impact (see **BIO-4** through **BIO-10**).	Avoidance and minimization of impacts would not reduce this impact to less than significant. The impact remains **significant**.	S-	S=	S=
	MM BIO-38:	Individual projects shall be scheduled to avoid construction during critical life stages or sensitive seasons (e.g. the nesting season; see **BIO-25**, and **BIO-11** through **BIO-24**).				
Impact 3.3-6: The 2008 RTP includes projects that would potentially displace riparian or wetland habitat.	**MM BIO-39:**	Construction through or adjacent to wetlands or riparian areas shall be avoided where feasible through route-planning.	The impact to wetlands and riparian areas would remain **significant**.	S-	S=	S=
	MM BIO-40:	Each transportation project shall avoid removal of wetland or riparian vegetation. Specific vegetation that is not to be removed shall be so marked during construction. Riparian vegetation removal shall be minimized.				
	MM BIO-41:	Each transportation project shall replace any disturbed wetland, riparian or aquatic habitat, either on-site or at a suitable off-site location at ratios to ensure no net loss.				
	MM BIO-42:	When individual projects include unavoidable losses of riparian or aquatic habitat, adjacent or nearby riparian or aquatic habitat shall be enhanced (e.g. through removal of non-native invasive wetland species and replacement with more ecologically valuable native species).				
Impact 3.3-7: The 2008 RTP would potentially increase siltation of streams and other water resources from exposures of erodible soils during construction activities.	**MM BIO-43:**	Individual projects near water resources shall implement Best Management Practices (BMPs) at construction sites to minimize erosion and sediment transport from the area. BMPs include encouraging growth of vegetation in disturbed areas, using straw bales or other silt-catching devices, and using settling basins to minimize soil transport. A more detailed description of BMPs is provided in Section 3.12 Water Resources.	Full implementation of each of these mitigation measures would not avoid the siltation impacts. The impact remains **significant**.	S-	S=	S=
	MM BIO-44:	Individual projects shall schedule construction activities to avoid sensitive times for biological resources (e.g. steelhead spawning periods during the winter and spring) and to avoid the rainy season when erosion and sediment transport is increased.				

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Impact 3.3-8: Implementation of the 2008 RTP would not conflict with any provisions of an adopted Habitat Conservation Plan, or Natural Community Conservation Plan (NCCP).	The 2008 RTP is not in conflict with any adopted Habitat Conservation Plan or Natural Communities Conservation Plan. No mitigation measures are necessary.	The impact is **less than significant**.	LTS	LTS	LTS
Cumulative Impacts 3.3-9: Urbanization in the SCAG region will increase substantially by 2035. The 2008 RTP, by increasing mobility and including land-use-transportation measures, influences the pattern of this urbanization.	The cumulative impacts to biological resources, due to the forecasted urban development associated with the 2008 RTP, would be mitigated using the same measures detailed for Impacts 3.3-1 through 3.3-8, in addition to the following measure. **MM BIO-45:** Future impacts to biological resources shall be minimized through cooperation, information sharing, and program development as part of SCAG's regional planning efforts. SCAG shall consult with the resource agencies, such as USFWS and CDFG.	The impacts to biological resources due to regional growth would be reduced through application of the mitigation measures; however, the 2008 RTP's accommodation of approximately 6 million people in the SCAG region by 2035 would contribute to cumulative impacts. Implementation of the 2008 RTP would have a cumulatively considerable contribution to urbanization, and, thus, the impact would remain **significant**.	S+	S+	S-
3.4 Cultural Resources					
Impact 3.4-1: Construction of projects from the 2008 RTP could cause a substantial adverse change in the significance of a historical resource.	**MM-CUL.1:** As part of the appropriate environmental review of individual projects, the project implementation agencies shall identify potential impacts to historic resources. A record search at the appropriate Information Center shall be conducted to determine whether the project area has been previously surveyed and whether historic resources were identified. **MM-CUL.2:** If indicated as necessary by a records search, prior to construction activities, project implementation agencies shall obtain a qualified architectural historian to conduct historic architectural surveys as recommended by the Archaeological	Due to the size and potentially large number of historic properties listed that could be disturbed as a result of the RTP projects, impacts to historic resources would remain **significant**.	S-	S=	S=

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	Information Center. In the event the records indicate that no previous survey has been conducted, the Information Center will make a recommendation on whether a survey is warranted based on the sensitivity of the project area for cultural resources within 1,000 feet of the improvement. **MM-CUL.3:** The project implementation agencies shall comply with Section 106 of the NHPA if federal funding or approval is required for the individual project. This law requires federal agencies to evaluate the impact of their actions on resources included in or eligible for listing in the National Register. Federal agencies must coordinate with the State Historic Preservation Officer in evaluating impacts and developing mitigation. This mitigation measure may include, but are not limited to the following: • The project implementation agencies shall carry out the maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation or reconstruction of any impacted historic resource, which shall be conducted in a manner consistent with the Secretary of the Interior's Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. **MM-CUL.3:** Where feasible, the project implementation agencies shall employ design measures to avoid historical resource areas. **MM-CUL.3:** Where feasible, noise buffers/walls and/or visual buffers/landscaping or some other material shall be constructed to preserve the contextual setting of significant built resources. In some instances, the following mitigation measure may be appropriate in lieu of the previous mitigation measure: **MM-CUL.4:** The project implementation agencies shall secure a qualified environmental agency and/or architectural historian, or other such qualified person to document any significant historical resource(s), by way of historic narrative, photographs, and architectural drawings, as mitigation for the effects of demolition of a resource. However, such documentation will not mitigate the effects to less than significance.				
Impact 3.4-2: Construction of projects from the 2008 RTP could cause a substantial adverse change in the significance of an archaeological resource.	**MM-CUL.5:** As part of the appropriate environmental review of individual projects, the project implementation agencies shall consult with the NAHC to determine whether known sacred sites are in the project area, and identify the Native American(s) to contact to obtain information about the project site. **MM-CUL.6:** Prior to construction activities, the project implementation	Due to the size and potentially large number of archaeological sites that could be disturbed as a result of the combined	S-	S=	S=

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		agencies shall obtain a qualified archaeologist to conduct a record search at the appropriate Information Center of the California Archaeological Inventory to determine whether the project area has been previously surveyed and whether resources were identified.	projects, impacts to archaeological resources would remain **significant.**			
	MM-CUL.7:	As necessary prior to construction activities, the project implementation agencies shall obtain a qualified archaeologist or architectural historian (depending on applicability) to conduct archaeological and/or historic architectural surveys as recommended by the Information Center. In the event the records indicate that no previous survey has been conducted, the Information Center will make a recommendation on whether a survey is warranted based on the sensitivity of the project area for cultural resources.				
	MM-CUL.8:	If the record search indicates that the project is located in an area rich with cultural materials, the project proponent shall retain a qualified archaeologist to monitor any subsurface operations, including but not limited to grading, excavation, trenching, or removal of existing features of the subject property.				
	MM-CUL.9:	Construction activities and excavation should be conducted to avoid cultural resources (if identified). If avoidance is not feasible, further work may be needed to determine the importance of a resource. The project implementation agencies shall obtain a qualified archaeologist familiar with the local archaeology, and/or as appropriate, an architectural historian who should make recommendations regarding the work necessary to determine importance. If the cultural resource is determined to be important under state or federal guidelines, impacts on the cultural resource will need to be mitigated.				
	MM-CUL.10:	Project implementation agencies shall stop construction activities and excavation in the area where cultural resources are found until a qualified archaeologist can determine the importance of these resources.				
Impact 3.4-3: Construction of projects from the 2008 RTP could directly or indirectly destroy unique paleontological resources or sites or unique geological features.	**MM-CUL.11:**	As part of the appropriate environmental review of individual projects, the project implementation agencies shall obtain a qualified paleontologist to identify and evaluate paleontological resources where potential impacts are considered high; the paleontologist shall also conduct a field survey in these areas.	Due to the large number of paleontological localities and unique geologic features found throughout the SCAG region that	S-	S=	S=
	MM-CUL.12:	Construction activities shall avoid known paleontological resources, if feasible, especially if the resources in a particular				

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	lithic unit formation have been determined through detailed investigation to be unique. **MM-CUL.13:** When a construction activity could significantly disturb soils or geologic formations in areas identified as having a moderate to high potential to support paleontological resources, a qualified researcher must be stationed on-site to observe during excavation operations and recover scientifically valuable specimens. As part of this mitigation, the following actions should be taken: • A certified paleontologist shall be retained (or required to be retained) by the project implementing agency prior to construction to establish procedures for surveillance and the preconstruction salvage of exposed resources if fossil-bearing sediments have the potential to be impacted. • The monitor shall provide preconstruction coordination with contractors, oversee original cutting in previously undisturbed areas of sensitive formations, halt or redirect construction activities as appropriate to allow recovery of newly discovered fossil remains, and oversee fossil salvage operations and reporting. • This measure shall be placed as a condition on all plans where excavation and earthmoving activity is proposed in a geologic unit having a moderate or high potential for containing fossils. • Excavations of paleontological resources should be overseen by the qualified paleontologist and the paleontological resources given to a local agency, or other applicable institution, where they could be displayed or used for research. **MM-CUL.14:** Where practicable, routes and project designs that would permanently alter unique geologic features shall be avoided.	could be disturbed as a result of the 2008 RTP, impacts to paleontological resources would remain **significant.**			
Impact 3.4-4: Construction of projects from the 2008 RTP could disturb human remains, including those interred outside of formal cemeteries.	**MM-CUL.15:** As part of environmental review of individual projects, project implementation agencies, in the event of discovery or recognition of any human remains, during construction or excavation activities associated with the project, in any location other than a dedicated cemetery, shall cease further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the coroner of the county in which the remains are	The excavation and construction that may be necessary for some projects in the 2008 RTP has the potential to adversely disturb human remains on	S-	S=	S=

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	discovered has been informed and has determined that no investigation of the cause of death is required; and **MM-CUL.16:** If the remains are of Native American origin: • The coroner will contact the Native American Heritage Commission in order to ascertain the proper descendants from the deceased individual. The coroner shall make a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods. This may include obtaining a qualified archaeologist or team of archaeologists to properly excavate the human remains or, • If the Native American Heritage Commission was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the commission, in which case • The landowner or his authorized representative shall obtain a Native American monitor, and an archaeologist, if recommended by the Native American monitor, and rebury the Native American human remains and any associated grave goods, with appropriate dignity, on the property and in a location that is not subject to further subsurface disturbance where the following conditions occur: • The NAHC is unable to identify a descendent; • The descendant identified fails to make a recommendation; or • The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the NAHC Commission fails to provide measures acceptable to the landowner.	lands that are part of ancient Native American burial sites or sacred lands, therefore this impact would remain **significant.**			
Cumulative Impacts 3.4-5: Urbanization in the SCAG region will increase substantially by 2035. The 2008 RTP, by increasing mobility and by inclusion of land-use-transportation measures, influences the pattern of this urbanization. The 2008 RTP's influence on growth contributes to regional impacts to existing historic resources and previously undisturbed and undiscovered cultural resources, as	The cumulative impacts to cultural resources, due to the forecasted urban development associated with the 2008 RTP, would be mitigated using the same measures detailed for Impacts 3.4-1 through 3.4-4, in addition to the following measure. **MM-CUL.17:** Future impacts to cultural resources shall be minimized through cooperation, information sharing, and SCAG's ongoing regional planning efforts. Resource agencies, such as the Office of Historic Preservation, shall be consulted during this	The impacts to cultural resources due to regional scale growth would be reduced through application of the mitigation measures, however the 2008	S+	S+	S-

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described in Impacts 3.4-1 through 3.4-4 above. This impact would be cumulatively considerable.	process.	RTP's accommodation of approximately 5.14 million people to the SCAG region by 2035 would contribute to cumulative impacts. Impacts to cultural and paleontological resources from the 2008 RTP would be **cumulatively considerable**.			
3.5 Energy					
Impact 3.5-1: The implementation of the 2008 RTP is likely to use electricity, natural gas, gasoline, diesel, and other non-renewable energy types in the construction and expansion of the regional transportation system and development in the region between the current conditions and 2035.	**MM-EN.1:** In reviewing projects, lead and implementing agencies shall consider energy implications of construction processes. In general the most energy efficient construction process and long-term operational design shall be selected unless there's an overriding reason why not.	Given the large amount of construction anticipated for the region, the energy that would be consumed by construction is anticipated to be **significant**.	S-	S=	S-
Impact 3.5-2: The implementation of the 2008 RTP is likely to substantially increase the consumption of electricity, natural gas, gasoline, diesel, and other non-renewable energy in the operation of the transportation system and operation of associated growth in the region between the current conditions and 2035.	In addition to the mitigation measures specified below, mitigation measures identified in the Transportation Section for the impacts of transportation system usage would serve to mitigate the impacts of growing transportation energy demand. **Mitigation Measures for State and Federal Government** **MM-EN.2:** State and federal lawmakers and regulatory agencies should pursue the design of programs to either require or incentivize the expanded availability and use of alternative-fuel vehicles to reduce the impact of shifts in petroleum fuel supply and price. **Mitigation Measures for SCAG** **MM-EN.3:** SCAG shall continue to consider energy uncertainty impacts prior to the development of the next Regional Transportation Plan. Topics that should be considered include: • How the price and availability of transportation fuels	The regional increase in transportation-related energy demand as a result of implementing the 2008 RTP would remain a **significant** impact, even with the above mitigation.	S-	S=	S-

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	affects revenues and demand; • How increases in fuel efficiency could affect revenues and emissions; • How the cost of commuting and personal travel affects mode choice and growth patterns; • How the cost of goods movement affects international trade and employment; or • How the escalation of fuel prices affects the cost of infrastructure construction, maintenance and operation. This work will help SCAG better understand the relationship between transportation, land use and energy uncertainty. **MM-EN.4:** SCAG shall convene key stakeholders to evaluate and where feasible, recommend transportation measures such as congestion pricing, a refined regional goods movement system and technologies that reduce fossil fuel consumption. **MM-EN.5:** SCAG shall encourage clean post recycle conversion technologies to produce energy or technologies that offset energy use or air emissions. **MM-EN.6:** SCAG shall continue to develop energy efficiency and green building guidance to provide direction on specific approaches and models and to specify levels of performance for regionally significant projects to be consistent with regional plans. **MM-EN.7:** SCAG shall encourage the Federal and State Government to increase clean, cost-effective, reliable, domestic renewable energy generation, such as solar and wind turbines. **MM-EN.8:** SCAG shall encourage the Federal Government to increase the Corporate Average Fuel Economy (CAFE) to a level that will reduce our dependence on petroleum and reduce greenhouse gas emissions. **MM-EN-9:** SCAG shall continue to pursue partnerships with Southern California Edison, municipal utilities, and the California Public Utilities Commission to promote energy efficiency and reduce greenhouse gas emissions in the region. **MM-EN-10:** SCAG shall continue to develop, in coordination with the California Air Resources Board, a data and information collection and analysis system that provides an understanding of energy demand and greenhouse gas emissions in the SCAG region. **MM-EN.11:** SCAG shall continue to work with local jurisdictions and energy providers, through its Energy and Environment Committee and other means, to encourage regional-scale planning for improved				

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	energy management. Future impacts to energy shall be minimized through cooperative planning, and information sharing within the SCAG region. **MM-EN.12:** SCAG shall continue to develop, in coordination with the California Air Resources Board, a data and information collection and analysis system that provides an understanding of the energy demand and greenhouse gas emissions in the SCAG Region. **Mitigation Measures for Local Agencies** **MM-EN.13:** Local agencies should consider various best practices and technological improvements that can reduce the consumption of fossil fuels such as: • Expanding light-duty vehicle retirement programs • Increasing commercial vehicle fleet modernization • Implementing driver training module on fuel consumption • Replacing gasoline powered mowers with electric mowers • Reducing idling from construction equipment • Incentivizing alternative fuel vehicles and equipment • Developing infrastructure for alternative fueled vehicles • Increasing use and mileage of High Occupancy Vehicle (HOV), High Occupancy Toll (HOT) and dedicated Bus Rapid Transit (BRT) lanes • Implementing truck idling rule, devices, and truck-stop electrification • Requiring electric truck refrigerator units • Reducing locomotives fuel use • Modernizing older off-road engines and equipment • Implementing cold ironing at ports • Encouraging freight mode shift • Limit use and develop fleet rules for construction equipment • Requiring zero-emission forklifts • Developing landside port strategy with alternative fuels, clean engines, and electrification **MM-EN.14:** Local agencies should include energy analyses in environmental documentation and general plans with the goal of				

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	conserving energy through the wise and efficient use of energy. For any identified energy impacts, appropriate mitigation measures should be developed and monitored. SCAG recommends the use of Appendix F, Energy Conservation, of the *CEQA Guidelines*. **MM-EN.15:** Local agencies should streamline permitting and provide public information to facilitate accelerated construction of solar and wind power. **MM-EN.16:** Local agencies should adopt a "Green Building Program" to promote green building standards. Green buildings can reduce local environmental impacts, regional air pollutant emissions and global greenhouse gas emissions. Green building standards involve everything from energy efficiency, usage of renewable resources and reduced waste generation and water usage. For example, water-related energy use consumes 19 percent of the state's electricity. The residential sector accounts for 48 percent of both the electricity and natural gas consumption associated with urban water use. While interest in green buildings has been growing for some time, cost has been a main consideration as it may cost more up front to provide energy-efficient building components and systems. Initial costs can be a hurdle even when the installed systems will save money over the life of the building. Energy efficiency measures can reduce initial costs, for example, by reducing the need for over-sized air conditioners to keep buildings comfortable. Undertaking a more comprehensive design approach to building sustainability can also save initial costs through reuse of building materials and other means. A comprehensive study of the value of green building savings is the 2003 report to California's Sustainable Building Task Force. In the words of the report: "While the environmental and human health benefits of green building have been widely recognized, this comprehensive report confirms that minimal increases in upfront costs of about 2% to support green design would, on average, result in life cycle savings of 20% of total construction costs -- more than ten times the initial investment. For example, an initial upfront investment of up to $100,000 to incorporate green building features into a $5 million project would result in a savings of $1 million in today's dollars over the life of the building." **MM-EN.17:** Local governments should alter zoning to improve jobs/housing balance and creating communities where people live closer to work, bike, walk, and take transit as a substitute for personal auto travel. Creating walkable, transit oriented nodes would generally reduce energy use and greenhouse gas emissions. Residential energy use (electricity and natural gas) accounts for				

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	14 percent of California's greenhouse gas emissions. It is estimated that households in transit-oriented developments drive 45 percent less than residents in auto-dependent neighborhoods. In addition, mixed land uses (i.e., residential developments near work places, restaurants, and shopping centers) with access to public transportation have been shown to save consumers up to 512 gallons of gasoline per year.. Furthermore, studies have shown that the type of housing (such as multi-family) and the size of a house have strong relationships to residential energy use. Residents of single-family detached housing consume over 20 percent more primary energy than those of multifamily housing and 9 percent more than those of single-family attached housing. **Mitigation Measures for Utilities** **MM-EN.18:** Utilities should install and maintain California Best Available Control Technologies on all power plants at the US-Mexico border. **MM-EN.19:** Utilities should consider increasing capacity of existing transmission lines, where feasible. **Mitigation Measures for Project Implementing Agencies/Developers** **MM-EN.20:** Project sponsors should support programs to reduce single occupancy vehicle trips such as telecommuting, ridesharing, alternative work schedules, and parking cash-outs. **MM-EN.21:** Project sponsors should support only the use of the best available technology including monitoring air and water impacts for locating any nuclear waste facility. **MM-EN.22:** Project sponsors should submit projected electricity and natural gas demand calculations to the local electricity or natural gas provider, for any project anticipated to require substantial utility consumption. Any infrastructure improvements necessary for project construction shall be completed according to the specifications of the energy provider. **MM-EN.23:** Project sponsors should consider the most cost-effective alternative and renewable energy generation facilities. **MM-EN.24:** Project sponsors should ensure that new buildings incorporate solar panels in roofing and tap other renewable energy sources to offset new demand on conventional power sources. **MM-EN.25:** Project sponsors should require energy efficient design for buildings. This may include strengthening local building codes for new construction and renovation to require a higher level of				

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	energy efficiency.				
	MM-EN.26: Project sponsors should fund and schedule energy efficiency "tune-ups" of existing buildings by checking, repairing, and readjusting heating, ventilation, air conditioning, lighting, hot water equipment, insulation and weatherization. (Facilitating or funding the improvement of energy efficiency in existing buildings could offset in part the global warming impacts of new development.)				
	MM-EN.27: Project sponsors should provide individualized energy management services for large energy users.				
	MM-EN.28: Project sponsors should require the use of energy efficient appliances and office equipment.				
	MM-EN.29: Project sponsors should pursue incentives and technical assistance for lighting efficiency.				
	MM-EN.30: Project sponsors should require that projects use efficient lighting. (Fluorescent lighting uses approximately 75% less energy than incandescent lighting to deliver the same amount of light.)				
	MM-EN.31: Project sponsors should require measures that reduce the amount of water sent to the sewer system. (Reduction in water volume sent to the sewer system means less water has to be treated and pumped to the end user, thereby saving energy.)				
	MM-EN.32: Project sponsors should incorporate on-site renewable energy production (through, e.g., participation in the California Energy Commission's New Solar Homes Partnership). Require project proponents to install solar panels, water reuse systems, and/or other systems to capture energy sources that would otherwise be wasted.				
	MM-EN.33: Project sponsors should pursue incentives to encourage the use of energy efficient equipment and vehicles.				
	MM-EN.34: Project sponsors should provide public education and publicity about energy efficiency programs and incentives.				
	MM-EN.35: In some instances, a project sponsor may find that measures that will directly reduce a project's greenhouse gas emissions are insufficient. A lead agency may consider whether carbon offsets would be appropriate. The project proponent could, for example, fund off-site projects (e.g., alternative energy projects) that will reduce carbon emissions, or could purchase "credits" from another entity that will fund such projects. The lead agency should ensure that any mitigation taking the form of carbon offsets is specifically identified and that such mitigation will in				

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	fact occur. **MM-EN.36:** Project sponsors should incorporate and local governments should include the following land use principles that use resources efficiently, eliminate pollution and significantly reduce waste into their projects, zoning codes and other implementation mechanisms: • Mixed-use residential and commercial development that is connected with public transportation and utilizes existing infrastructure. • Land use and planning strategies to increase biking and walking trips **MM-EN.37:** Project sponsors and local governments should integrate green building measures into project design and zoning such as those identified in the U.S. Green Building Council's Leadership in Energy and Environmental Design, Energy Star Homes, Green Point Rated Homes, and the California Green Builder Program. Energy saving measures that should be explored for new and remodeled buildings include: • Using energy efficient materials in building design, construction, rehabilitation, and retrofit • Encouraging new development to exceed Title 24 energy efficiency requirements • Developing Cool Communities measures including tree planting and light-colored roofs. These measures focus on reducing ambient heat, which reduces energy consumption related to air conditioning and other cooling equipment. • Utilizing efficient commercial/residential space and water heaters: This could include the advertisement of existing and/or development of additional incentives for energy efficient appliance purchases to reduce excess energy use and save money. Federal tax incentives are provided online at http://www.energystar.gov/index.cfm?c=Products.pr_tax_credits • Encouraging landscaping that requires no additional irrigation: utilizing native, drought tolerant plants can reduce water usage up to 60 percent compared to traditional lawns. • Encouraging combined heating and cooling (CHP), also known as cogeneration, in all buildings.				

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	• Encouraging neighborhood energy systems, which allow communities to generate their own electricity • Orienting streets and buildings for best solar access • Encouraging buildings to obtain at least 20% of their electric load from renewable energy (3)				
Impact 3.5-3: Implementation of the 2008 RTP has the potential to not fully address the greenhouse gas reduction levels identified in AB 32 (1990 levels by 2020).	See Mitigation Measures under Impact 3.5-2.	The impact is **significant** even after mitigation.	S=	S-	S-
Cumulative Impact 3.5-4: Implementation of the investments and policies in the 2008 RTP would contribute to a cumulatively considerable increase in the amount of total energy consumed in the SCAG region between 2008 and 2035.	The cumulative impacts to biological resources, due to the forecasted urban development associated with the 2008 RTP, would be mitigated using the same measures detailed for Impacts 3.5-1 through 3.5-3 in addition to the following measure. **MM BIO-45:** Future impacts to biological resources shall be minimized through cooperation, information sharing, and program development as part of SCAG's regional planning efforts. SCAG shall consult with the resource agencies, such as U.S. Fish and Wildlife Service and California Department of Fish and Game during this update process.	Even with mitigation, this cumulative impact would remain **significant**.	S=	S=	S-
3.6 Geology, Soils and Seismicity					
Impact 3.6-1: Implementation of the 2008 RTP could expose people or structures to potential substantial adverse effects, risk of surface rupture, ground shaking, liquefaction and landsliding or seismically-induced ground shaking or seiche waves.	**MM GEO-1:** Implementing agencies shall ensure that projects are designed in accordance with county and city code requirements for seismic ground shaking. The design of projects shall consider seismicity of the site, soil response at the site, and dynamic characteristics of the structure, in compliance with the appropriate California Building Code and State of California design standards for construction in or near fault zones, as well as all standard design, grading, and construction practices in order to avoid or reduce geologic hazards. **MM GEO-2:** Implementing agencies shall ensure that projects located within or across Alquist-Priolo Zones comply with design requirements provided in Special Publication 117, published by the California Geological Survey, as well as relevant local, regional, state, and federal design criteria for construction in seismic areas. **MM GEO-3:** The project implementing agencies shall ensure that	Although projects can employ siting and design standards which consider seismically active areas and Alquist-Priolo fault zones, due to the regional scale of the Plan, the impact remains **significant**.	S-	S=	S=

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		geotechnical analyses from qualified geotechnical experts are conducted within construction areas to ascertain soil types and local faulting prior to preparation of project designs. These investigations would identify areas of potential failure and recommend remedial geotechnical measures to eliminate any problems.				
Impact 3.6-2: Significant earthwork associated with implementation of the 2008 RTP could result in substantial soil erosion and/or the loss of topsoil in some cases potentially resulting in slope failure.	**MM GEO-4:**	The project implementing agencies shall ensure that project designs provide adequate slope drainage and appropriate landscaping to minimize the occurrence of slope instability and erosion. Design features shall include measures to reduce erosion caused by stormwater. Road cuts shall be designed to maximize the potential for revegetation.	Given the topography, ecology and meteorology of the SCAG region and the regional scale of the project, the impact will remain **significant**.	S-	S=	S=
	MM GEO-5:	Implementing agencies shall ensure that projects avoid landslide areas and potentially unstable slopes wherever feasible.				
	MM GEO-6:	The project implementing agencies shall ensure that site-specific geotechnical investigations conducted by a qualified geotechnical expert shall be required prior to preparation of project designs. These investigations would identify areas of potential failure and recommend remedial geotechnical measures to eliminate any problems.				
Impact 3.6-3: Projects included in the 2008 RTP could be located on expansive soils, a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.	**MM GEO-7:**	The project implementing agencies shall ensure that site-specific geotechnical investigations conducted by a qualified geotechnical expert shall be required prior to preparation of project designs to identify the potential for subsidence and expansive soils. These investigations would identify areas of potential failure and recommend remedial geotechnical measures to eliminate any problems. Recommended corrective measures, such as structural reinforcement and replacing soil with engineered fill, shall be implemented in project designs.	Given the underlying geologic features of the SCAG region and the regional scale of the project, the impact will remain **significant**.	S-	S=	S=
	MM GEO-8:	Implementing agencies shall ensure that projects avoid geologic units or soils that are unstable, expansive soils, and soils prone to lateral spreading, subsidence, liquefaction, or collapse wherever feasible.				
	MM GEO-9:	Implementing agencies shall ensure that, prior to preparing project designs, new and abandoned wells are identified within construction areas to ensure the stability of nearby soils.				
Cumulative Impact 3.6-4: Urbanization in the SCAG region would increase substantially by 2035. The 2008 RTP, by increasing mobility and including land-use-transportation measures, influences the	Mitigation measures MM.GEO-1 through MM.GEO-9 would be applied to this impact in addition to the following measure:		The impacts to geological resources due to regional scale growth would be	S=	S=	S-
	MM GEO-10:	Future impacts to geological resources shall be minimized				

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pattern of this urbanization. Implementation of the 2008 RTP would have the potential to result in a cumulatively considerable adverse effect on human beings and property when considered at the regional scale.	through cooperation, information sharing, and program development as part of SCAG's regional planning efforts. Resource agencies, such as the USGS, shall be consulted during this update process.	reduced through application of the mitigation measures, however the 2008 RTP's accommodation of an additional 5.14 million more people in the SCAG region by 2035 would contribute to **cumulative significant** impacts.			
3.7 Hazardous Materials					
Impact 3.7-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	**MM-HM.1:** The project implementation agency shall comply with all applicable laws, regulations, and health and safety standards set forth by federal, state, and local authorities that regulate the proper handling of such materials and their containers to the routine transport, use, and disposal of hazardous materials does not create a significant hazard to the public or the environment.	The mitigation measure would assure appropriate steps taken to minimize any hazard to the public or the environment. The impact after mitigation would be **less than significant.**	LTS	LTS	LTS
Impact 3.7-2: The implementation of the 2008 RTP could create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment during transportation.	**MM-HM.2:** SCAG shall encourage the USDOT, the Office of Emergency Services, and Caltrans to continue to conduct driver safety training programs and encourage the private sector to continue conducting driver safety training. **MM-HM.3:** SCAG shall encourage the USDOT and the CHP to continue to enforce speed limits and existing regulations governing goods movement and hazardous materials transportation.	The improvements to the regional transportation system by 2035 would facilitate a substantial increase in the transportation of all goods, including hazardous materials. However, even with the above mitigation, this impact would remain **significant.**	S-	S+	S=
Impact 3.7-3: The implementation of the 2008 RTP could create a hazard to the public or the environment by emitting hazardous materials within	Mitigation measures above to reduce risk of upset would also apply to this impact. **MM-HM.4:** Prior to approval of any RTP project, the Lead Agency for each	The improvements to the regional transportation	S-	S=	S=

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one-quarter mile of a school.	individual project shall consider existing and known planned school locations when determining the alignment of new transportation projects and modifications to existing transportation facilities.	system by 2035 would facilitate a substantial increase in the transportation of all goods, including hazardous materials. Even with the above mitigation, this impact would remain **significant.**			
Impact 3.7-4: The implementation of the 2008 RTP could create a hazard to the public or the environment through the disturbance of contaminated property during the construction of new transportation or expansion of existing transportation facilities.	**MM-HM.5:** Prior to approval of any RTP project, the project implementation agency shall consult all known databases of contaminated sites and undertake a standard Phase 1 Environmental Site Assessment in the process of planning, environmental clearance, and construction for projects included in the 2008 RTP. If contamination is found the implementing agency shall coordinate clean up and/or maintenance activities. **MM-HM.6:** Where contaminated sites are identified, the project implementation agency shall develop appropriate mitigation measures to assure that worker and public exposure is minimized to an acceptable level and to prevent any further environmental contamination as a result of construction.	The mitigation measure would assure that contaminated properties are identified and appropriate steps taken to minimize human exposure and prevent any further environmental contamination. The impact after mitigation would be **less than significant.**	LTS	LTS	LTS
Cumulative Impact 3.7-5: The 2008 RTP would contribute a cumulatively significant amount of hazardous material transportation impacts to areas outside of the SCAG region.	Mitigation Measures **MM-HM.1 though MM.HM.6** would also address this impact.	Even with the above mitigation, the regional contribution to potential impacts outside the region would remain **significant.**	S+	S+	S-
Cumulative Impact 3.7-6: Implementation of the investments and policies in the 2008 RTP could create a potential hazard to the public or the environment by the disturbance of contaminated sites as a result of population and housing growth in the region.	Mitigation Measures **MM-HM.1 though MM.HM.6** as implemented by local planners and private developers would address this impact.	With appropriate review and clean up or maintenance, this impact would not be cumulatively considerable and therefore would be **less than significant.**	LTS	LTS	LTS

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3.8 Land Use					
Impact 3.8-1: The proposed 2008 RTP contains transportation projects and strategies to distribute the future growth in the region. These projects and strategies could result in inconsistencies with currently applicable adopted local land use plans and policies.	**MM-LU.1:** SCAG shall encourage cities and counties in the region to provide SCAG with electronic versions of their most recent general plan and any updates as they are produced. **MM-LU.2:** SCAG shall encourage through regional policy comments that cities and counties update their general plans at least every ten years, as recommended by the Governor's Office of Planning and Research. **MM-LU.3:** SCAG shall work with its member cities and counties to ensure that transportation projects and growth are consistent with the RTP and general plans. **MM-LU.4:** Planning is an iterative process and SCAG is a consensus building organization. SCAG shall work with cities and counties to encourage that general plans reflect RTP policies. SCAG will work to build consensus on how to address inconsistencies between general plans and RTP policies. **MM-LU.5:** SCAG shall provide technical assistance and regional leadership to implement the Compass Blueprint growth strategy and integrate growth and land use planning with the existing and planned transportation network. **MM-LU.6:** SCAG shall provide planning services to local governments through Compass Blueprint Demonstration Projects. These projects will help local jurisdictions: • Update General Plans to reflect Compass Blueprint principles and integrate land use and transportation planning. • Develop specific plans, zoning overlays and other planning tools to enable and stimulate desired land use changes within 2% Strategy Opportunity Areas • Complete the economic analysis and community involvement efforts that will ensure that the planned changes are market feasible and responsible to stakeholder concerns. • Visualize potential changes, through innovative graphics and mapping technology to inform the dialogue about growth, development and transportation at the local and regional level.	It is likely that in some instances, local currently adopted general plans will be inconsistent with RTP policies. This impact would be **significant**.	S-	S=	S+

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	MM-LU.7: SCAG shall continue with a targeted public relations strategy that emphasizes regional leadership, the benefits and implications of Compass Blueprint principles, and builds a sense of common interests among Southern Californians. **MM-LU.8:** SCAG shall expand the role of the Compass Partnership, a forum for convening representatives from government, civic leaders and members of the development community. SCAG shall encourage cooperative land use decision-making and planning efforts between neighboring jurisdictions. **MM-LU.9:** SCAG shall use its Intergovernmental Review Process to provide review and comment on large development projects regarding their consistency with the RTP and other regional planning efforts. **MM-LU.10:** Local governments should provide for new housing consistent with state housing law to accommodate their share of the forecasted regional growth. **MM-LU.11:** Local governments should adopt and implement General Plan Housing Elements that accommodate the housing need identified through the RHNA process. Affordable housing should be provided consistent with the RHNA income category distribution adopted for each jurisdiction. **MM-LU.12:** Local governments should consider shared regional priorities, as outlined in the Compass Blueprint, RTP, and other ongoing regional planning efforts in determining their own development goals and drafting local plans. **MM-LU.13:** Local governments and subregional organizations should develop ordinance and other programs which will enable and assist in the cleanup and redevelopment of brownfield sites. **MM-LU.14:** Local governments and subregional organizations should develop adaptive reuse ordinances and other programs that will enable the conversion of vacant or aging commercial, office and some industrial properties to housing and mixed-use housing.				
Impact 3.8-2: The 2008 RTP contains transportation projects that have the potential to disrupt or divide established communities.	Mitigation measures **MM-LU.1 through MM-LU.14** would be applied to mitigate this impact in addition to the following measures. **MM-LU.15:** As part of the second tier review performed on a project-by-project basis, a study should be completed by the lead agency to determine whether an area is classified as a "cohesive community" as defined by Environmental Handbook Volume 4, Community Impact Assessment (Caltrans 1997). The study should include the method for determining the level of	The 2008 RTP proposes projects that have the potential to disrupt or divide communities and, considering the scale and number of	S-	S=	S+

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	cohesiveness for a given community and identify mitigation measures to reduce or avoid significant effects. Specific mitigation measures could include, but are not limited to pedestrian overcrossings, "cut and covers" and development of parks or other social interaction centers. **MM-LU.16:** Significant adverse impacts to community cohesion resulting from the displacement of residences or businesses shall be mitigated with specific relocation measures as dictated by local, state or federal requirements on a project-by project basis. Such measures include assistance in finding a new location, assistance with moving, or compensation for losses. Where it has been determined that displacement is necessary and displaced individuals are eligible, a relocation assistance program consistent with the State Uniform Location Assistance and Real Properties Acquisition Policies Act provides compensation and assistance in finding new residence for displaced individuals. **MM-LU.17:** Project implementation agencies shall design new transportation facilities that consider access to existing community facilities, as feasible. During the design phase of the project, community amenities and facilities shall be identified and considered in the design of the project. **MM-LU.18:** Project implementation agencies shall design roadway improvements that minimize barriers to pedestrians and bicyclists, as feasible. During the design phase, pedestrian and bicycle routes shall be determined that permit connections to nearby community facilities.	these projects, even with mitigation, it is likely that in some cases impacts will not be mitigated to a less than significant level. This impact would be **significant**.			
Cumulative Impact 3.8-3: Urbanization in the SCAG region will increase substantially by 2035. The 2008 RTP, by increasing mobility and including land-use-transportation measures, influences the pattern of this urbanization. The 2008 RTP's influence on growth contributes to regional cumulatively considerable impacts to land use and would change the intensity of land use in some areas.	The mitigation measures listed above for Impacts 3.8-1 and 3.8-2 would be applied as mitigation for this impact. In addition, the following measure would apply. **MM LU-19:** SCAG's on-going regional planning efforts will be used to build a consensus in the region to support changes in land use to accommodate future population growth while maintaining the quality of life in the region.	In order to accommodate the projected population totals assumed for 2035, the region will need to change land uses and increase the intensity of some existing land use. The cumulative impact would remain **significant**.	S-	S+	S+

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3.9 Noise						
Impact 3.9-1: Grading and construction activities associated with the proposed freeway, arterial, transit and HSRT projects identified in the 2008 RTP would intermittently and temporarily generate noise levels above ambient background levels. Noise levels in the immediate vicinity of the construction sites would increase substantially sometimes for extended duration.	**MM-NO.1:**	Project implementing agencies shall comply with all local sound control and noise level rules, regulations, and ordinances.	The above mitigation measures would reduce noise impacts; however, it is anticipated that construction noise would remain a **significant** impact.	S-	S=	S=
	MM-NO.2:	Project implementing agencies shall limit the hours of construction to between 6:00 a.m. and 8:00 p.m. on Monday through Friday and between 7:00 a.m. and 8:00 p.m. on Saturdays. Construction should not occur on Sundays or Holidays within 3,000 feet of sensitive receptors without specific overriding need being documented.				
	MM-NO.3:	Equipment and trucks used for project construction shall utilize the best available noise control techniques (including mufflers, intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds) in order to minimize construction noise impacts.				
	MM-NO.4:	Impact equipment (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered wherever possible, to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed air exhaust would be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves should be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures will be used, such as the use of drilling rather than impact equipment, whenever feasible.				
	MM-NO.5:	Project implementing agencies shall ensure that stationary noise sources are located as far from sensitive receptors as possible. If they must be located near existing receptors, they shall be adequately muffled.				
	MM-NO.6:	The project implementing agencies shall designate a complaint coordinator responsible for responding to noise complaints received during the construction phase. The name and phone number of the complaint coordinator shall be conspicuously posted at construction areas and on all advanced notifications. This person shall be responsible for taking steps required to resolve complaints, including periodic noise monitoring, if necessary.				
	MM-NO.7:	Noise generated from any rock-crushing or screening operations performed within 3,000 feet of any occupied				

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		residence shall be mitigated by the project proponent by strategic placement of material stockpiles between the operation and the affected dwelling or by other means approved by the local jurisdiction.				
	MM-NO.8:	Project implementing agencies shall direct contractors to implement appropriate additional noise mitigation measures including, but not limited to, changing the location of stationary construction equipment, shutting off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources to comply with local noise control requirements.				
	MM-NO.9:	Project implementing agencies shall implement use of portable barriers in the vicinity of sensitive receptors during construction including construction of subsurface barriers, debris basins, and storm water drainage facilities.				
	MM-NO.10:	In residential areas, pile driving will be limited to daytime working hours. No pile-driving or blasting operations shall be performed within 3,000 feet of an occupied residence on Sundays, legal holidays, or between the hours of 8:00 p.m. and 8:00 a.m. on other days. Any variance from this condition shall be approved by the local jurisdiction only with documentation of overriding need.				
	MM-NO.11:	Wherever possible, sonic or vibratory pile drivers will be used instead of impact pile-drivers (sonic pile drivers are only effective in some soils). If sonic or vibratory pile drivers are not feasible, acoustical enclosures will be provided as necessary to ensure that pile driving noise does not exceed speech interference criterion at the closest sensitive receptor.				
	MM-NO.12:	Engine and pneumatic exhaust controls on pile drivers will be required as necessary to ensure that exhaust noise from pile driver engines is minimized to the extent feasible.				
	MM-NO.13:	Where feasible, pile holes will be pre-drilled to reduce potential noise and vibration impacts.				
Impact 3.9-2: Noise-sensitive land uses could be exposed to noise in excess of normally acceptable noise levels and/or could experience substantial increases in noise as a result of the operation of expanded or new transportation facilities (i.e., increased traffic resulting from new highways, addition of highway lanes, roadways, ramps, and new transit facilities as well as increased	**MM-NO.14:**	As part of the appropriate environmental review of each project, a project specific noise evaluation shall be conducted and appropriate mitigation identified and implemented.	Although mitigation measures are implemented for the impact, it may not reduce noise levels to below regulatory levels in all circumstances. This	S-	S=	S=
	MM-NO.15:	Project implementation agencies shall employ, where their jurisdictional authority permits, land use planning measures, such as zoning, restrictions on development, site design, and use of buffers to ensure that future development is compatible				

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use of existing transit facilities, etc.).	with adjacent transportation facilities. **MM-NO.16:** Project implementation agencies shall, to the extent feasible and practicable, maximize the distance between noise-sensitive land uses and new roadway lanes, roadways, rail lines, transit centers, park-and-ride lots, and other new noise-generating facilities. **MM-NO.17:** Project implementation agencies shall construct sound reducing barriers between noise sources and noise-sensitive land uses. Sound barriers can be in the form of earth-berms or soundwalls. Constructing roadways so as appropriate and feasible that they are depressed below-grade of the existing sensitive land uses also creates an effective barrier between the roadway and sensitive receptors. **MM-NO.18:** Project implementation agencies shall, to the extent feasible and practicable, improve the acoustical insulation of dwelling units where setbacks and sound barriers do not sufficiently reduce noise. **MM-NO.19:** The project implementation agencies shall implement, to the extent feasible and practicable, speed limits and limits on hours of operation of rail and transit systems, where such limits may reduce noise impacts. **MM-NO.20:** To reduce noise impacts, maximize distance of the HSRT route alignment from sensitive receptors. If the HSRT guideway is constructed along the center of a freeway, operation noise impacts would be reduced by the increase in distance to the noise sensitive sites and the masking effects of the freeway traffic noise. **MM-NO.21:** Reduce HSRT speed in the vicinity of sensitive receptors. **MM-NO.22:** As a last resort, eliminate the noise-sensitive receptor by acquiring rail and freeway rights-of-way. This would ensure the effective operation of all transportation modes. **MM-NO.23:** Passenger stations, central maintenance facilities, decentralized maintenance facilities, and electric substations should be located away from sensitive receptors.	impact would remain **significant**.			
Cumulative Impact 3.9-3: Cumulative ambient noise levels could increase in urban areas of the region to exceed normally acceptable noise levels or have substantial increases in noise as a result of the operation of expanded or new transportation facilities (i.e., increased traffic resulting from new highways, addition of highway lanes, roadways,	Mitigation measures intended to reduce the noise impacts on sensitive receptors are part of the 2008 RTP. These include: site design, buffers, soundwalls, etc. Further reduction in noise impacts would be obtained through the implementation of the measures described in **MM-NO.14 through MM-NO.23.**	Mitigation measures **MM-NO.15** through **MM-NO.23** may not reduce noise levels to below regulatory levels in all cases. Therefore, the	S-	S=	S=

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ramps, and new use of new transit facilities as well as increased use of existing transit facilities, etc.).			impact would be **significant.**			
3.10 Open Space						
Impact 3.10-1: Implementation of the proposed 2008 RTP could result in substantial disturbance and/or loss of prime farmlands and/or grazing lands, throughout the six-county SCAG region.	**MM-OS.1:**	Individual projects must be consistent with federal, state, and local policies that preserve agricultural lands and support the economic viability of agricultural activities, as well as policies that provide compensation for property owners if preservation is not feasible.	This impact would remain **significant** because it is anticipated that substantial loss and disturbance of agricultural land would occur.	S-	S=	S=
	MM-OS.2:	For projects in agricultural areas, project implementation agencies shall contact the California Department of Conservation and each county's Agricultural Commissioner's office to identify the location of prime farmlands and lands that support crops considered valuable to the local or regional economy. Impacts to such lands shall be evaluated in project-specific environmental documents. The analysis shall use the land evaluation and site assessment (LESA) analysis method (CEQA Guidelines §21095), as appropriate. The project implementation agencies or local jurisdictions shall be responsible for ensuring adherence to the mitigation measures prior to construction. Mitigation measures may include conservation easements or the payment of in-lieu fees.				
	MM-OS.3:	For those projects that require federal funding, the federal agency evaluates the effects of the action to agricultural resources using the criteria set forth in the Farmland Protection Policy Act (FPPA). The FPPA is administered by the NRCS, which determines impacts to farmland that could occur due to the proposed project. The determination is made through coordination between the federal agency proposing or supporting the project and NRCS. The assessment of potential impacts to farmland from corridor type projects, which is typical of transportation projects analyzed in this PEIR, will require completion of Form NRCS-CPA-106, Farmland Conservation Impact Rating for Corridor Type Projects. NRCS will make a determination, using set thresholds, as to whether additional project specific mitigation would be required.				
	MM-OS.4:	Project implementation agencies shall consider corridor realignment, buffer zones and setbacks, and berms and fencing where feasible, to avoid agricultural lands and to reduce conflicts between transportation uses and agricultural lands.				

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	MM-OS.5:	Prior to final approval of each project and when feasible and prudent, the implementing agency shall establish conservation easement programs to mitigate impacts to prime farmland.				
	MM-OS.6:	Prior to final approval of each project, the implementing agency shall to the extent practical and feasible, avoid impacts to prime farmlands or farmlands that support crops considered valuable to the local or regional economy.				
	MM-OS.7:	Prior to final approval of each project, the implementing agency shall encourage enrollments of agricultural lands for counties that have Williamson Act programs, where applicable.				
	MM.OS-8:	SCAG shall support policies that preserve and promote the productivity and viability of agricultural lands, including promoting the availability of locally grown and organic food in the region.				
	MM-OS.9:	SCAG shall use its IGR process to review projects with potentially significant impacts to important farmlands and recommend impact avoidance and mitigation measures.				
	MM-OS.10	SCAG shall work with member agencies and the region's farmland interests to develop regional guidelines for buffering farmland from urban encroachment, resolving conflicts that prevent farming on hillsides and other designated areas, and closing loopholes that allow conversion of non-farm uses without a grading permit.				
	MM-OS.11:	Developers and local governments should submit for IGR review projects with potentially significant impacts to important farmlands. Projects should include mitigation measures to reduce impacts and demonstrate project alternatives that avoid or lessen impact to agricultural lands. Mitigation should occur at a 1:1 ratio.				
Impact 3.10-2: Implementation of the projects included in the 2008 RTP would result in a substantial loss or disturbance of existing open space and recreation lands.	**MM-OS.12:**	Project implementation agencies shall ensure that projects are consistent with federal, state, and local plans that preserve open space.	It is anticipated that impacts to agricultural lands would not be able to be mitigated in every instance. Therefore, This impact would remain **significant**.	S+	S+	S-
	MM-OS.13:	Project implementation agencies shall consider corridor realignment, buffer zones and setbacks, and berms and fencing where feasible, to avoid open space and recreation land and to reduce conflicts between transportation uses and open space and recreation lands.				
	MM-OS.14:	Project implementation agencies shall identify open space areas that could be preserved and shall include mitigation measures (such as dedication or payment of in-lieu fees) for the loss of open space.				

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IMPACT	MITIGATION MEASURES		2008 RTP SIGNIFICANCE AFTER MITIGATION	No Project	Modified 2004 RTP	Envision
	MM-OS-15:	Prior to final approval of each project, the implementing agency shall conduct the appropriate project-specific environmental review, including consideration of loss of open space. Potential significant impacts to open space shall be mitigated, as feasible. The project implementation agencies or local jurisdiction shall be responsible for ensuring adherence to the mitigation measures prior to construction.				
	MM-OS.16	For projects that require approval or funding by the USDOT, project implementation agencies shall comply with Section 4(f) of the USDOT Act.				
	MM-OS.17:	Future impacts to open space and recreation lands shall be avoided through cooperation, information sharing, and program development as part of SCAG's ongoing regional planning efforts.				
	MM-OS.18:	SCAG shall establish criteria for evaluating impacts to regionally significant open space resources, and will recommend mitigation measures for significant impacts to regional resources. These recommendations will be included in SCAG's Regional Open Space Guidance.				
	MM-OS.19:	SCAG shall develop and implement coordinated mitigation programs for regional projects, with an emphasis on regional transportation projects.				
	MM-OS.20:	SCAG shall produce and maintain a list/map of potential conservation opportunity areas. These conservation opportunity areas may be used by local governments and project sponsors as priority areas for mitigating impacts to open space resources. SCAG's forthcoming regional open space guidance document will include additional information on conservation opportunity areas.				
	MM-OS.21:	SCAG shall use its IGR process to review projects with potentially significant impacts to open space and recommend impact avoidance and mitigation measures.				
	MM-OS.22:	Project sponsors should ensure that transportation systems proposed in the RTP avoid or mitigate significant impacts to natural lands, community open space and important farmland, including cumulative impacts and open space impacts from the growth associated with transportation projects and improvements.				
	MM-OS.23:	Project sponsors should ensure that at least one acre of unprotected open space is permanently conserved for each acre of open space developed as a result of growth that				

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		accompanies transportation projects/improvements.				
	MM-OS.24:	Individual projects submitted for IGR review should either avoid significant impacts to regionally significant open space resources or mitigate the significant impacts through measures consistent with regional open space policies for conserving natural lands, community open space and farmlands. All projects submitted for IGR review shall demonstrate consideration of alternatives that would avoid or reduce impacts to open space.				
	MM-OS.25:	Individual projects should include into project design, to the maximum extent practicable, mitigation measures and recommended best practices aimed at minimizing or avoiding impacts to natural lands, including, but not limited to FHWA's Critter Crossings, and Ventura County Mitigation Guidelines.				
Impact 3.10-3: Implementation of the 2008 RTP could increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial deterioration of the facilities would occur; or could result in a decrease in performance objectives for existing parks.	**MM-OS.26:**	SCAG, in collaboration with its member agencies, shall work to enhance community open space and its accessibility.	Even with mitigation, implementation of the 2008 RTP would induce population in areas that are currently underserved by recreational facilities. This impact would remain **significant**.	S+	S+	S-
	MM-OS.27:	SCAG shall continue to work with the state to develop approaches for evaluating environmental impacts within the Compass Blueprint program, particularly energy, air quality, water, and open space and habitat.				
	MM-OS.28:	SCAG shall support local jurisdictions and other service providers in their efforts to develop sustainable communities and provide, equally to all members of society, accessible and effective services such as: public education, housing, health care, social services, recreational facilities, law enforcement, and fire protection.				
	MM-OS.29:	SCAG shall encourage member jurisdictions to work as partners to address regional outdoor recreation needs and to acquire the necessary funding for the implementation of their plans and programs.				
	MM-OS.30:	SCAG shall encourage member jurisdictions that have trails and trail segments determined to be regionally significant to work together to support regional trail networks. SCAG shall encourage joint use of utility, transportation and other rights-of-way, greenbelts, and biodiversity areas				
	MM-OS.31:	Local governments should prepare a Needs Assessment to determine the level of adequate community open space level for their areas.				
	MM-OS.32:	Local governments should encourage patterns of urban development and land use, which reduce costs on infrastructure and make better use of existing facilities.				

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Cumulative Impact 3.10-4: Urbanization in the SCAG region will increase substantially by 2035. The 2008 RTP, by increasing mobility and including land-use-transportation measures, influences the pattern of this urbanization. The 2008 RTP's influence on growth patterns contributes to regional cumulatively considerable impacts to open space and result in a loss of open space and agricultural lands in the region.	The Mitigation measures listed above for impacts 3.10-1 through 3.10-3 shall be applied to Tier 2 projects (General and Specific plans and individual development projects) in the region. In addition to these measures, the following mitigation measures would be applied to Tier 2 and 3 projects (General and Specific plans and individual development projects) in the SCAG Region. **MM-OS.33:** SCAG's Compass Blueprint program and other on-going regional planning efforts will be used to build a consensus in the region to support changes in land use to accommodate future population growth while maintaining the quality of life in the region. **MM-OS.34:** Project level mitigation for significant cumulative and growth-inducing impacts on open space resources will include but not be limited to the conservation of natural lands, community open space and important farmland through existing programs in the region or through multi-party conservation compacts facilitated by SCAG. **MM-OS.35:** Local governments should establish transfer of development rights (TDR) programs to direct growth to less agriculturally valuable lands (while considering the potential effects at the sites receiving the transfer) and ensure the continued protection of the most agriculturally valuable land within each county through the purchase of the development rights for these lands. Local governments should also consider the following: • Tools for the preservation of agricultural lands such as eliminating estates and ranchettes and clustering to retain productive agricultural land. • Easing restrictions on farmer's markets and encourage cooperative farming initiatives to increase the availability of locally grown food. • Considering partnering with school districts to develop farm-to-school programs **MM-OS.36:** Local governments should avoid the premature conversion of farmlands by promoting infill development and the continuation of agricultural uses until urban development is imminent; if development of agricultural lands is necessary, growth should be directed to those lands on which the continued viability of agricultural production has been compromised by surrounding urban development on the loss of local markets. **MM-OS.37:** SCAG shall support local jurisdictions and other service providers in their efforts to develop sustainable communities	In order to accommodate the anticipated growth in the region by 2035, substantial changes in vacant, agricultural and open space lands will occur. The cumulative impact would remain **significant**.	S+	S+	S-

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	and provide, equally to all members of society, accessible and effective services such as: public education, housing, health care, social services, recreational facilities, law enforcement, and fire protection.				
	MM-OS.38: SCAG shall consider consistency with ongoing regional open space planning in funding opportunities and programs administered by SCAG.				
	MM-OS.39: Local governments should consider the most recent annual report on open space conservation in planning and evaluating projects and programs in areas with regionally significant open space resources.				
	MM-OS.40: Local governments should encourage patterns of urban development and land use, which reduce costs on infrastructure and make better use of existing facilities. Strategies local governments should pursue include: • Increase the accessibility to natural areas lands for outdoor recreation. • Promote infill development and redevelopment to revitalize existing communities • Utilize "green" development techniques • Promote water-efficient land use and development.				
	MM-OS.41 Project sponsors and local governments should increase the accessibility to natural areas lands for outdoor recreation.				
	MM-OS.42: Project sponsors and local governments should promote infill development and redevelopment to revitalize existing communities.				
	MM-OS.43: Project sponsors should incorporate and local governments should include land use principles, such as green building, that use resources efficiently, eliminate pollution and significantly reduce waste into their projects, zoning codes and other implementation mechanisms				
	MM-OS.44: Project sponsors and local governments should promote water-efficient land use and development.				
	MM-OS.45: Project sponsors and local governments should encourage multiple use spaces and encourage redevelopment in areas where it will provide more opportunities for recreational uses and access to natural areas close to the urban core.				

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3.11 Population, Housing and Employment					
Impact 3.11-1: Implementation of the 2008 RTP could facilitate substantial population growth to some areas of the region.	**MM-POP.1:** SCAG shall work with its member agencies to implement growth strategies to create an urban form designed to utilize the existing transportation networks and the transportation improvements contained in the 2008 RTP, enhancing mobility and reducing land consumption.	The policies included in the Plan seek to direct growth in a way that is efficient for both mobility and land consumption. However, implementation of the Plan would help distribute growth to certain vacant areas of the region. Thus, the impact would remain **significant.**	S-	S=	S=
Impact 3.11-2: Implementation of the 2008 RTP projects could require the acquisition of rights-of-way that could displace a substantial number of existing homes and businesses.	**MM-POP.2:** For projects with the potential to displace homes and/or businesses, project implementation agencies shall evaluate alternate route alignments and transportation facilities that minimize the displacement of homes and businesses. An iterative design and impact analysis would help where impacts to homes or businesses are involved. Potential impacts shall be minimized to the extent feasible. If possible, existing rights-of-way should be used. **MM-POP.3:** Project implementation agencies shall develop a construction schedule that minimizes potential neighborhood deterioration from protracted waiting periods between right-of-way acquisition and construction.	Not all of the projects in the 2008 RTP will be able to be built in existing rights-of-way. A substantial number of businesses and residences would be displaced through the development of projects in the 2008 RTP. This impact would remain **significant**.	S-	S=	S+
Cumulative Impact 3.11-3: Urbanization in the SCAG region will increase substantially by 2035. The 2008 RTP, by increasing mobility and including land-use-transportation measures, influences the pattern of this urbanization. The 2008 RTP's influence on growth contributes to regional cumulatively considerable impacts to currently vacant natural land.	Mitigation measures MM-POP.1 through MM-POP.3 would be applied to mitigate this cumulative impact in addition to the following measure. **MM-POP.4**: SCAG's Compass Blueprint strategy will be used to build consensus in the region relating to changes in land use to accommodate future population growth while maintaining the quality of life in the region.	The accessibility afforded by the 2008 RTP, and the expected shifts in population, households, and employment associated with the mobility benefits would change the growth patterns in	S-	S+	S+

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		the region. The impact would remain **significant**.			
3.12 Public Services and Utilities					
Impact 3.12-1: Construction and implementation of the 2008 RTP would affect the level of transportation-related public services facilities, such as police and fire/emergency personnel and associated stations or other public facilities in the SCAG Region.	**MM-PS.1:** Project implementation agencies shall ensure that prior to construction all necessary local and state road and railroad encroachment permits are obtained. The project implementation agency shall also comply with all applicable conditions of approval. As deemed necessary by the governing jurisdiction, the road encroachment permits may require the contractor to prepare a traffic control plan in accordance with professional engineering standards prior to construction. Traffic control plans should include the following requirements: • Identification of all roadway locations where special construction techniques (e.g., directional drilling or night construction) would be used to minimize impacts to traffic flow. • Development of circulation and detour plans to minimize impacts to local street circulation. This may include the use of signing and flagging to guide vehicles through and/or around the construction zone. • Scheduling of truck trips outside of peak morning and evening commute hours. • Limiting of lane closures during peak hours to the extent possible. • Usage of haul routes minimizing truck traffic on local roadways to the extent possible. • Inclusion of detours for bicycles and pedestrians in all areas potentially affected by project construction. • Installation of traffic control devices as specified in the California Department of Transportation Manual of Traffic Controls for Construction and Maintenance Work Zones. • Development and implementation of access plans for highly sensitive land uses such as police and fire stations, transit stations, hospitals, and schools. The access plans would be developed with the facility owner or administrator. To minimize disruption of emergency vehicle access, affected jurisdictions shall be asked to	The impact would be **less than significant** with mitigation.	LTS	LTS	LTS

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		identify detours for emergency vehicles, which will then be posted by the contractor. Notify in advance the facility owner or operator of the timing, location, and duration of construction activities and the locations of detours and lane closures. • Storage of construction materials only in designated areas. • Coordination with local transit agencies for temporary relocation of routes or bus stops in work zones, as necessary.				
Impact 3.12-2: Construction necessary to implement the 2008 RTP may uncover and potentially sever underground utility lines (electric and natural gas).	**MM-PS.2:**	Prior to construction, the project implementation agency shall identify the locations of existing utility lines. The contractor shall avoid all known utility lines during construction.	The impact would be **less than significant** after mitigation.	LTS	LTS	LTS
Impact 3.12-3: Construction necessary to implement the 2008 RTP would affect the demand for solid waste services in the SCAG region.	**MM-PS.3:**	Projects identified in the 2008 RTP that require solid waste collection will coordinate with the local public works department to ensure that the existing public services and utilities would be able to handle the increase. If the current infrastructure servicing the project site is found to be inadequate, infrastructure improvements for the appropriate public service or utility shall be identified in each project's CEQA documentation.	The impact would be **less than significant** after mitigation.	LTS	LTS	LTS
	MM-PS.4:	Each of the proposed projects identified in the 2008 RTP shall comply with applicable regulations related to solid waste disposal.				
	MM-PS.5:	The construction contractor shall work with the respective County's Recycling Coordinator to ensure that source reduction techniques and recycling measures are incorporated into project construction.				
	MM-PS.6:	The amount of solid waste generated during construction will be estimated prior to construction, and appropriate disposal sites will be identified and utilized.				
	MM-PS.7:	Project implementation agencies shall integrate green building measures into project design such as those identified in the U.S. Green Building Council's Leadership in Energy and Environmental Design, energy Star Homes, Green Point Rated Homes, and the California Green Builder Program. These measures would include the following: • Reuse and minimization of construction and demolition (C&D) debris and diversion of C&D waste from landfills to recycling facilities.				

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	• The inclusion of a waste management plan that promotes maximum C&D diversion. • Source reduction through (1) use of materials that are more durable and easier to repair and maintain, (2) design to generate less scrap material through dimensional planning, (3) increased recycled content, (4) use of reclaimed materials, and (5) use of structural materials in a dual role as finish material (e.g. stained concrete flooring, unfinished ceilings, etc.). • Reuse of existing structure and shell in renovation projects. • Design for deconstruction without compromising safety. • Design for flexibility through the use of moveable walls, raised floors, modular furniture, moveable task lighting and other reusable building components. • Development of indoor recycling program and space. **MM-PS.8:** Project implementation agencies shall discourage the siting of new landfills unless all other waste reduction and prevention actions have been fully explored. If landfill siting or expansion is necessary, landfills should be sited with an adequate landfill-owned, undeveloped land buffer to minimize the potential adverse impacts of the landfill in neighboring communities. **MM-PS.9:** Project implementation agencies shall discourage exporting of locally generated waste outside of the SCAG region. Disposal within the county where the waste originates shall be encouraged as much as possible. Green technologies for long-distance transport of waste (e.g., clean engines and clean locomotives or electric rail for waste-by-rail disposal systems) and consistency with SCAQMP and RTP policies should be required. **MM-PS.10:** Project implementation agencies shall adopt Zero Waste goals and practices and look for opportunities for voluntary actions to exceed the 50% waste diversion target. **MM-PS.11:** Project implementation agencies shall build local markets for waste prevention, reduction, and recycling practices. **MM-PS.12:** Project implementation agencies shall develop ordinances that promote waste prevention and recycling such as: requiring waste prevention and recycling efforts at all large events and venues; implementing recycled content procurement programs; and instituting ordinances to divert food waste away from landfills and toward food banks and composting facilities.				

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	MM-PS.13: Project implementation agencies shall develop environmentally friendly alternative waste management strategies such as composting, recycling, and conversion technologies. **MM-PS.14:** Project implementation agencies shall develop and site composting, recycling, and conversion technology facilities that are environmentally friendly and have minimum environmental and health impacts.				
Cumulative Impact 3.12-4: Urbanization in the SCAG region will increase substantially by 2035. The 2008 RTP, by increasing mobility and including land-use-transportation measures, influences the pattern of this urbanization. The 2008 RTP's influence on growth contributes to regional cumulatively considerable impacts to the response times of police and fire and emergency services in the SCAG region.	Less than significant. None required.	The impact would not be cumulatively considerable and would be **less than significant.**	LTS	LTS	LTS
Cumulative Impact 3.12-5: Urbanization in the SCAG region will increase substantially by 2035. The 2008 RTP, by increasing mobility and including land-use-transportation measures, influences the pattern of this urbanization. The 2008 RTP's influence on growth contributes to regional cumulatively considerable impacts to the staffing level of police and fire and emergency services in the SCAG region.	**MM-PS.15:** The growth inducing potential of individual projects shall be carefully evaluated so that the full implications of the projects are understood. Individual environmental documents shall quantify indirect impacts (growth that could be facilitated or induced) on public services and utilities to the extent feasible. Lead and responsible agencies then will make any necessary adjustments to the applicable General Plan. Any such identified adjustment shall be communicated to SCAG. **MM-PS.16:** The project implementation agency shall identify projects in the 2008 RTP that require police protection, fire service, and emergency medical service and shall coordinate with local fire and police departments to ensure that the existing public services would be able to handle the increase in demand for their services. If the current levels of services at the project site are found to be inadequate, infrastructure improvements and/or personnel requirements for the appropriate public service shall be identified in each project's CEQA documentation.	The demand to hire and train new police, fire and emergency personnel would remain a **significant** impact.	S=	S=	S=
Cumulative Impact 3.12-6: Urbanization in the SCAG region will increase substantially by 2035. The 2008 RTP, by increasing mobility and by inclusion of land-use-transportation measures, influences the pattern of this urbanization. The 2008 RTP's influence on urbanization patterns contributes to regional cumulatively considerable impacts to the number of school-age children and the demand for school facilities in different parts of the SCAG	**MM-PS.17:** Project implementation agencies shall undertake project specific review of the public utilities and services as part of project specific environmental review. For any identified impacts, project implementation agencies shall ensure that the appropriate school district has the school capacity, or is planning for the capacity, that the project will generate. Appropriate mitigation measures, such as new school construction or expansion, shall be identified. The project implementation agencies or local jurisdiction shall be responsible for ensuring adherence to the mitigation measures. SCAG shall be provided with documentation of compliance with	The region's cumulative demand for new schools and teachers would be a **significant** impact on public services.	S=	S=	S=

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region.		any necessary mitigation measures.				
Cumulative Impact 3.12-7: Urbanization in the SCAG region will increase substantially by 2035. The 2008 RTP, by increasing mobility and including land-use-transportation measures, influences the pattern of this urbanization. The 2008 RTP's influence would create a cumulatively considerable impact to the demand for solid waste services in the SCAG region.	**MM-PS.18:**	The California Integrated Waste Management Board shall continue to enforce solid waste diversion mandates that are enacted by the Legislature.	While disposal capacity for the solid waste in 2035 has been identified, the cumulative impacts of collecting solid waste, transporting it to an available facility, and disposing of it would remain **significant.**	S=	S=	S=
	MM-PS.19:	Local jurisdictions shall continue to adopt programs to comply with state solid waste diversion rate mandates and, where possible, shall encourage further recycling to exceed these rates.				
	MM-PS.20:	Local jurisdictions shall implement or expand city or county-wide recycling and composting programs for residents and businesses. This could include extending the types of recycling services offered (e.g., to include food and green waste recycling) and providing public education and publicity about recycling services.				
	MM-PS.21:	Project implementation agencies shall coordinate regional approaches and strategic siting of waste management facilities.				
	MM-PS.22:	Project implementation agencies shall facilitate the creation of synergistic linkages between community businesses and the development of eco-industrial parks and materials exchange centers where one entity's waste stream becomes another entity's raw material by making priority funding available for projects that involve co-location of facilities.				
	MM-PS.23:	Project implementation agencies shall prioritize siting of new solid waste management facilities including recycling, composting, and conversion technology facilities in conjunction with existing waste management or material recovery facilities.				
	MM-PS.24:	Project implementation agencies shall increase programs to educate the public and increase awareness of reuse, recycling, composting, and green building benefits and raise consumer education issues at the county and city level, as well as at local school districts and education facilities.				
	MM-PS.25:	SCAG shall encourage projects to reuse and recycle construction and demolition waste.				
	MM-PS.26:	SCAG shall encourage methane recovery in local landfills and wastewater treatment plants to generate electricity.				
3.13 Security and Emergency Preparedness						
Impact 3.13-1: Implementation of the 2008 RTP could impair transportation safety, security, and	**MM-SEP.1:**	SCAG shall help ensure the rapid repair of transportation infrastructure in the event of an emergency.	Due to the geographic span	S+	S=	S=

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reliability for people and goods in the region.	• SCAG, in cooperation with local and state agencies, shall identify critical infrastructure needs necessary for: a) emergency responders to enter the region, b) evacuation of affected facilities, and c) restoration of utilities. • SCAG shall establish transportation infrastructure practices that promote and enhance security. **MM-SEP.2:** SCAG shall continue to promote the use of intelligent transportation system (ITS) technologies that enhance transportation security. • SCAG shall work to expand the use of ITS to improve surveillance, monitoring and distress notification systems and to assist in the rapid evacuation of disaster areas • SCAG shall facilitate the incorporation of security into the Regional ITS Architecture. • Transit operators should incorporate ITS technologies as part of their security and emergency preparedness and share that information with other operators. • Aside from deploying ITS technologies for advanced customer information, transit agencies should work intensely with ethnic, local and disenfranchised communities through public information/outreach sessions ensuring public participation is utilized to its fullest. In case of evacuation, these transit dependent persons may need additional assistance to evacuate to safety.	and complexity of the SCAG region, the impact on transportation safety, security, and reliability for all people and goods in the region would remain **significant**.			
Impact 3.13-2: The RTP has the potential to inhibit the prevention, protection, response to, and recovery from major human-caused or natural events that could create a significant hazard to the public threatening and impacting lives, property, the transportation network and the regional economy.	SCAG does not intend to undertake a first response or emergency management role. SCAG seeks to become a conduit for coordination and collaboration among these stakeholders at the regional level. **MM-SEP.3:** SCAG shall establish transportation infrastructure practices that promote and enhance security. • SCAG shall work with transportation operators to plan and coordinate transportation projects, as appropriate, with Department of Homeland Security grant projects, to enhance the regional transit security strategy (RTSS). • SCAG should establish transportation infrastructure practices that identify and prioritize the design, retrofit, hardening, and stabilization of critical transportation	Due to the geographic span and complexity of the SCAG region, this impact would remain **significant**.	S+	S=	S=

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	infrastructure to prevent failure, to minimize loss of life and property, injuries, and avoid long term economic disruption. • SCAG should establish a Transportation Security Working Group (TSWG) with goals of RTP consistency with RTSS, and to find ways SCAG programs can enhance RTSS. **MM-SEP.4:** SCAG shall establish a forum where policy makers can be educated and regional policy can be developed • SCAG shall work with local officials to develop regional consensus on regional transportation safety, security, and safety security policies. **MM-SEP.5:** SCAG shall help to enhance the region's ability to deter and respond to acts of terrorism, human-caused or natural disasters through regionally cooperative and collaborative strategies. • SCAG shall work with local officials to develop regional consensus on regional transportation safety, security, and safety security policies. **MM-SEP.6:** SCAG shall help to enhance the region's ability to deter and respond to terrorist incidents, human-caused or natural disasters by strengthening relationship and coordination with transportation. • SCAG shall work with local officials to develop regional consensus on regional transportation safety, security, and safety security policies. • SCAG shall encourage all SCAG elected officials are educated in NIMS. • SCAG shall work with partner agencies, federal, state and local jurisdictions to improve communications and interoperability and to find opportunities to leverage and effectively utilize transportation and public safety/security resources in support of this effort. **MM-SEP.7:** SCAG will work to enhance emergency preparedness awareness among public agencies and with the public at large. • SCAG shall work with local officials to develop regional consensus on regional transportation safety, security, and safety security policies. **MM-SEP.8:** SCAG shall work to improve the effectiveness of regional plans by maximizing the sharing and coordination of resources				

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Table ES-3: 2008 RTP Impacts, Mitigation Measures and Comparison for Alternatives

IMPACT	MITIGATION MEASURES		2008 RTP SIGNIFICANCE AFTER MITIGATION	No Project	Modified 2004 RTP	Envision
		that would allow for proper response by public agencies. • SCAG shall encourage and provide a forum for local jurisdictions to develop mutual aid agreements for essential government services during any incident recovery				
	MM-SEP.9:	SCAG shall help to enhance the capabilities of local and regional organizations, including first responders, through provision and sharing of information. • SCAG shall work with local agencies to collect regional GeoData in a common format, and provide access to the GeoData for emergency planning, training and response. • SCAG shall establish a forum for cooperation and coordination of these plans and programs among the regional partners including first responders and operations agencies • SCAG shall develop and establish a regional information sharing strategy, linking SCAG and its member jurisdictions for ongoing sharing and provision of information pertaining to the region's transportation system and other critical infrastructure.				
	MM-SEP.10:	SCAG shall provide the means for collaboration in planning, communication, and information sharing before, during, or after a regional emergency. • SCAG shall develop and incorporate strategies and actions pertaining to response and prevention of security incidents and events as part of the on-going regional planning activities. • SCAG shall offer a regional repository of GIS data for use by local agencies in emergency planning, and response, in a standardized format. • SCAG should enter into agreements with other MPOs to provide this data, in coordination with the California OES in the event that an event disrupts SCAG's ability to function.				
Impact 3.13-3: Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	**MM-SEP.11:** **MM-SEP.12:**	SCAG shall discourage development, or encourage the use of special design requirements, in areas with steep slopes, high fire, flood, and seismic hazards. SCAG shall maintain Buffer Zones or natural areas for adequate protection of lives and properties against natural and	The mitigation measures would assure that the number of people or structures exposed	LTS	LTS	LTS

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IMPACT	MITIGATION MEASURES		2008 RTP SIGNIFICANCE AFTER MITIGATION	No Project	Modified 2004 RTP	Envision
		man-made hazards.	to fire threat would be minimized. The impact after mitigation would be **less than significant.**			
	MM-SEP.13:	SCAG shall discourage development on potentially hazardous developments in hillsides, canyons, areas susceptible to flooding, earthquakes, wildfire and other known hazards, and areas with limited access for emergency equipment.				
	MM-SEP.14:	SCAG shall minimize public expenditure for infrastructure and facilities to support urban type land uses in areas where public health and safety could not be guaranteed.				
	MM-SEP.15:	SCAG shall promote Fire-wise Land Management by encouraging the use of fire-resistant vegetation and the elimination of brush and chaparral in the immediate vicinity of development in areas with high fire threat.				
	MM-SEP.16:	SCAG shall promote Fire Management Planning that help reduce fire threats in the region as part of the *Compass Blueprint and other ongoing regional planning efforts.*				
Cumulative Impact 3.13-4: Urbanization in the SCAG region will increase substantially by 2035. The 2008 RTP, by increasing mobility and including land-use-transportation measures, influences the pattern of this urbanization. The 2008 RTP's influence on growth contributes to regional cumulatively considerable fire threat to development in the SCAG region.	**MM-SEP.17:**	SCAG shall encourage local jurisdictions to strengthen and fully enforce fire codes and regulations.	The impact would remain **significant** because development would occur in areas that have a high, very high, or extreme threat of fire.	S+	S+	S-
	MM-SEP.18:	SCAG shall encourage the use of fire-resistant materials when constructing projects in areas with high fire threat.				
	MM-SEP.19:	SCAG shall encourage the use of fire-resistant vegetation and the elimination of brush and chaparral in the immediate vicinity of development in areas with high fire threat.				
	MM-SEP.20:	SCAG shall encourage reduction of fire threats in the region as part of the Compass Blueprint process and as part of other on-going regional planning efforts.				
	MM-SEP.21:	Project implementation agencies shall encourage the use of fire-resistant vegetation native to Southern California and/or to the local microclimate (e.g., vegetation that has high moisture content, low growth habits, ignition-resistant foliage, or evergreen growth) and discourage the use of fire-promoting species especially non-native, invasive species (e.g., pampas grass, fennel, mustard, or the giant reed) in the immediate vicinity of development in areas with high fire threat.				
	MM-SEP.22:	Project implementation agencies shall encourage natural re-vegetation or seeding with local, native species after a fire and discourage re-seeding of non-native, invasive species to promote healthy, natural ecosystem re-growth. Native vegetation is more likely to have deep root systems that prevent slope failure and erosion of burned areas than shallow-rooted non-natives.				

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IMPACT	MITIGATION MEASURES	2008 RTP SIGNIFICANCE AFTER MITIGATION	No Project	Modified 2004 RTP	Envision
3.14 Transportation					
Impact 3.14-1: In 2035 there would be substantially more total daily Vehicle Miles of Travel (VMT) than the current daily VMT. Implementation of the 2008 RTP would contribute to this increase.	Measures intended to reduce vehicle miles traveled are part of the 2008 RTP. These include: increasing rideshare and work-at-home opportunities to reduce demand on the transportation system, investments in non-motorized transportation and maximizing the benefits of the land use-transportation connection and other Travel Demand Management measures. **MM-TR.1:** Beyond the currently financially and institutionally feasible measures included in the 2008 RTP, SCAG shall identify further reduction in VMT that could be obtained through land use strategies, additional car-sharing programs, additional vanpools, additional bicycle programs, and implementation of a universal employee transit access pass (TAP) program. **MM.TR-2:** Local governments should coordinate controlled intersections so that traffic passes more efficiently through congested areas. Where traffic signals or street lights are installed, require the use of Light Emitting Diode (LED) technology. **MM.TR-3:** Local governments should promote ride sharing programs e.g., by designating a certain percentage of parking spaces for high-occupancy vehicles, providing larger parking spaces to accommodate vans used for ride-sharing, and designating adequate passenger loading and unloading and waiting areas. **MM.TR-4:** Local governments should create car-sharing programs. Accommodations for such programs include providing parking spaces for the car-share vehicles at convenient locations accessible by public transportation. **MM.TR-5:** Local governments should encourage the use of public transit systems by enhancing safety and cleanliness on vehicles and in and around stations, providing shuttle service to public transit, offering public transit incentives and providing public education and publicity about public transportation services. **MM.TR-6:** Local governments should encourage bicycling and walking by incorporate bicycle lanes into street systems in regional transportation plans, new subdivisions, and large developments, creating bicycle lanes and walking paths directed to the location of schools and other logical points of destination and provide adequate bicycle parking, and encouraging commercial projects to include facilities on-site to encourage employees to bicycle or walk to work.	Implementation of measures beyond those institutionally and economically feasible measures identified in the 2008 RTP would be expected to reduce VMT, however even with this mitigation, the 2035 VMT would be substantially greater than the existing VMT. Therefore, the increase in VMT would remain a **significant** impact.	S+	S=	S=

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IMPACT	MITIGATION MEASURES	2008 RTP SIGNIFICANCE AFTER MITIGATION	No Project	Modified 2004 RTP	Envision
Impact 3.14-2: In 2035 there would be substantially higher average Vehicle Hours Traveled (VHT) in delay than the current condition. Implementation of the 2008 RTP would contribute to this increase.	Measures intended to reduce vehicle hours of delay are part of the 2008 RTP. These include: system management, increasing rideshare and work-at-home opportunities to reduce demand on the transportation system, investments in non-motorized transportation, maximizing the benefits of the land use-transportation connection and key transportation investments targeted to reduce delay. Further reduction in VHT in delay would be obtained through the measures described for **Impact 3.14-1**.	Implementation of measures beyond those institutionally and economically feasible measures identified in the 2008 RTP would be expected to reduce VHT spent in delay for all vehicles, however even with this mitigation, the 2035 total vehicle VHT in delay would be substantially greater than the existing VHT in delay. Therefore, the increase in total vehicle VHT in delay would remain a **significant** impact.	S+	S=	S=
Impact 3.14-3: In 2035 there would be substantially greater average daily VHT in delay for heavy-duty truck trips than the current condition. Implementation of the 2008 RTP would contribute to this increase.	Mitigation measures intended to reduce daily heavy-duty truck vehicle hours of delay are part of the 2008 RTP. These include: goods movement capacity enhancements, system management, increasing rideshare and work-at-home opportunities to reduce demand on the transportation system, investments in non-motorized transportation, maximizing the benefits of the land use-transportation connection and key transportation investments targeted to reduce heavy-duty truck delay (as described in the Project Description in Section 2.0). Further reduction in VHT in delay for *all* vehicles would be obtained through the implementation of the measures described for **Impact 3.14-1**. These mitigation measures could decrease VHT spent in delay for heavy-duty trucks.	Implementation of measures beyond those institutionally and economically feasible measures identified in the 2008 RTP would be expected to reduce VHT spent in delay for heavy trucks, however even with this mitigation, the 2035 heavy-duty truck VHT in delay would be substantially greater than the existing VHT in delay. Therefore, the increase in heavy-	S+	S=	S=

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		duty VHT in delay would remain a **significant impact.**			
Impact 3.14-4: Implementation of the 2008 RTP would contribute to an increase in the percent of work opportunities within 45 minutes travel time by personal vehicle or by transit in 2035, relative to the existing condition.	The impact would be beneficial. No mitigation measures are required.	**Beneficial.**	B	B	B
Impact 3.14-5: Implementation of the 2008 RTP would contribute to a lower system-wide fatality accident rate for all travel modes in 2035 compared to the existing condition.	The impact would be neutral. No mitigation measures are required. Implementation of the California Strategic Highway Safety Plan could reduce transportation related fatalities in the region and is referenced in the Regional Transportation Plan.	**No Impact.**	N	N	N
Impact 3.14-6: Implementation of the 2008 RTP would contribute to a lower system-wide injury accident rate for all travel modes in 2035 compared to the existing condition.	The impact is beneficial. No mitigation measures are required. The impact would be neutral. No mitigation measures are required. Implementation of the California Strategic Highway Safety Plan could reduce transportation related fatalities in the region and is referenced in the Regional Transportation Plan.	**Beneficial.**	N	B	B
Cumulative Impact 3.14-7: Implementation of the 2008 RTP would contribute to a cumulatively considerable amount of transportation impacts, such as VMT and all-vehicle VHT in delay, to counties outside of the SCAG region.	The mitigation measures described for **Impact 3.14.-1** would address this impact.	**Significant.**	S+	S=	S=
3.15 Water Resources					
Impact 3.15-1: Local surface water quality could be degraded by increased roadway runoff created by RTP projects, potentially violating water quality standards associated with wastewater and stormwater permits. RTP projects could alter the existing drainage patterns in ways that would result in substantial erosion or siltation.	The following mitigation measures are recommended: **MM-W.1:** Transportation improvements shall comply with federal, state, and local regulations regarding storm water management. State-owned highways and other transportation facilities are subject to compliance with a statewide stormwater permit issued to Caltrans. **MM-W.2:** Project implementation agencies shall ensure that new facilities include structural water quality control features such as drainage channels, detention basins, oil and grease traps, filter systems, and vegetated buffers to prevent pollution of adjacent water resources by polluted runoff where required by applicable urban storm water runoff discharge permits. **MM-W.3:** Structural storm water runoff treatment shall be provided according to the applicable urban storm water runoff permit where facilities will be operated by a permitted municipality or county. Where Caltrans is the operator, the statewide permit	The mitigation measures would not fully mitigate water quality degradation, violation of water quality standards, or prevent erosion or siltation. The impact remains **significant.**	S-	S=	S=

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IMPACT	MITIGATION MEASURES	2008 RTP SIGNIFICANCE AFTER MITIGATION	No Project	Modified 2004 RTP	Envision
	applies.				
	MM-W.4: Implementation agencies shall consult with the RWQCB and Storm Water Management Plan permit holders as projects are designed to ensure that projects protect the goals of the Clean Water Act and comply with federal storm water NPDES permits.				
	MM-W.5: Implementation agencies shall ensure that operational best management practices for street cleaning, litter control, and catch basin cleaning are implemented to prevent water quality degradation in compliance with applicable storm water runoff discharge permits. Efforts shall be made to assure treatment controls are in place as early as possible, such as during the acquisition process for rights-of-way, not just later during the facilities design and construction phase.				
	MM-W.6: Implementation agencies shall comply with the State-wide construction storm water discharge permit requirements including preparation of Storm Water Pollution Prevention Plans for transportation improvement construction projects. Roadway construction projects shall comply with the Caltrans storm water discharge permit. Best Management Practices shall be identified and implemented to manage site erosion, wash water runoff, and spill control.				
	MM-W.7: Projects requiring the discharge of dredged or fill materials into U.S. waters, including wetlands, shall comply with sections 404 and 401 of the Clean Water Act including the requirement to obtain a permit from the U.S. Army Corps of Engineers and the governing Regional Water Quality Control Board.				
	MM-W.8: In compliance with applicable municipal separate storm sewer system discharge permits as well as Caltrans' storm water discharge permit, long-term sediment control shall be effected through erosion control and revegetation programs designed to allow reestablishment of native vegetation on slopes and undeveloped areas.				
	MM-W.9: Drainage of roadway runoff shall comply with Caltrans' storm water discharge permit. Wherever possible, roadways shall be designed to convey storm water through vegetated median strips that provide detention capacity and allow for infiltration before reaching culverts.				
	The infiltration capacity of storm water runoff detention facilities shall be sized to minimize, to the greatest extent possible, the effect of increased impervious				

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IMPACT	MITIGATION MEASURES	2008 RTP SIGNIFICANCE AFTER MITIGATION	No Project	Modified 2004 RTP	Envision
	surfaces.				
Impact 3.15-2: Increased impervious surfaces due to transportation projects would reduce groundwater infiltration.	**MM-W.10:** Project implementation agencies shall avoid designs that require continual dewatering where feasible. **MM-W.11:** Project implementation agencies shall ensure that projects that do require continual dewatering facilities implement monitoring systems and long-term administrative procedures to ensure proper water management that prevents degrading of surface water and minimizes, to the greatest extent possible, adverse impacts on groundwater for the life of the project. Construction designs shall comply with appropriate building codes and standard practices including the Uniform Building Code. **MM-W.12:** Treatment and control features such as detention basins, infiltration strips, and other features to control surface runoff and facilitate groundwater recharge shall be incorporated into the design of new transportation projects early on in the process to ensure that adequate acreage and elevation contours are provided during the right-of-way acquisition process. **MM-W.13:** Where feasible, transportation facilities shall not be sited in groundwater recharge areas, to prevent conversion of those areas to impervious surface.	Implementation of these mitigation measures would reduce the regional impact but impacts would remain **significant** due to the large areas of additional impermeable surfaces.	S-	S=	S=
Impact 3.15-3: The 2008 RTP could increase flooding hazards, by placing transportation investments, on alluvial fans and within 100-year flood hazard areas.	The following mitigation measures are recommended: **MM-W.14:** Natural riparian conditions near projects shall be maintained, wherever feasible, to minimize the effects of stormwater flows at stream crossings. Where feasible, riparian areas should be restored or expanded to mitigate additional impervious surface and associated runoff. **MM-W.15:** Implementing agencies shall assure projects mitigate for changes to the volume of runoff, where any downstream receiving waterbody has not been designed and maintained to accommodate the increase in flow velocity, rate, and volume without impacting the water's beneficial uses. Pre-project flow velocities, rates, and volumes must be not be exceeded. This applies not only to increases in storm water runoff from the project site, but also to hydrologic changes induced by flood plain encroachment. Projects should not cause or contribute to conditions that degrade the physical integrity or ecological function of any downstream receiving waters. **MM-W.16:** Impacts shall be reduced to the extent possible by providing	After implementation of the mitigation measures, the 2008 RTP projects would regionally have a **less than significant** impact.	LTS	LTS	LTS

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	culverts and facilities that do not increase the flow velocity, rate, or volume and/or acquiring sufficient storm drain easements that accommodate an appropriately vegetated earthen drainage channel, as required in MM-W.15. **MM-W.17:** All roadbeds for new highway and rail facilities should be elevated at least one foot above the 100-year base flood elevation. Since alluvial fan flooding is not often identified on FEMA flood maps, the risk of alluvial fan flooding shall be evaluated and projects shall be sited to avoid alluvial fan flooding where feasible. Delineation of floodplains and alluvial fan boundaries should attempt to account for future hydrologic changes caused by global climate change. **MM-W.18:** Transportation improvements shall comply with local, state, and federal floodplain regulations. Projects requiring federal approval or funding shall comply with Executive Order 11988 on Floodplain Management, which requires avoidance of incompatible floodplain development, restoration and preservation of the natural and beneficial floodplain values, and maintenance of consistency with the standards and criteria of the National Flood Insurance Program. **MM-W.19:** Improvement projects on existing facilities shall include upgrades to stormwater drainage facilities to accommodate any increased runoff volumes. These upgrades may include the construction of detention basins or structures that will delay peak flows and reduce flow velocities, including expansion and restoration of wetlands and riparian buffer areas. System designs shall be completed to eliminate increases in peak flow rates from current levels.				
Cumulative Impact 3.15-4: Urbanization in the SCAG region will increase substantially by 2035. The 2008 RTP, by increasing mobility and by including land-use-transportation measures, influences the pattern of this urbanization. The 2008 RTP's influence on growth would contribute to the conversion of undeveloped land to urban uses, resulting in impacts to water quality.	Mitigation Measures W.1 through W.9 shall be applied to all urban development projects, as feasible, in addition to the following measures: **MM-W.20:** Local governments should encourage Low Impact Development and natural spaces that reduce, treat, infiltrate and manage stormwater runoff flows in all new developments. **MM-W.21:** Local governments should implement green infrastructure and water-related green building practices through incentives and ordinances. Green building resources include the U.S. Green Building Council's Leadership in Energy and Environmental Design, Green Point Rated Homes, and the California Green Builder Program. **MM-W.22:** Local governments should integrate water resources planning with existing greening and revitalization initiatives, such as street greening, tree planting, development and restoration of	The urban development expected by 2035 would create adverse water quality and waste discharge conditions and/or unfavorably alter existing drainage patterns in a manner that would result in substantial erosion or siltation. The 2008 RTP's influence on growth	S+	S+	S-

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	public parks, and parking lot conversions, to maximize benefits and share costs. **MM-W.23:** Developers, local governments, and water agencies should maximize permeable surface area in existing urbanized areas to protect water quality, reduce flooding, allow for groundwater recharge, and preserve wildlife habitat. New impervious surfaces should be minimized to the greatest extent possible, including the use of in-lieu fees and off-site mitigation. **MM-W.24:** SCAG shall continue to work with local jurisdictions and water quality agencies, through its Water Policy Task Force and other means, to encourage regional-scale planning for improved water quality management and pollution prevention. Future impacts to water quality shall be avoided through cooperative planning, information sharing, and comprehensive pollution control measure development within the SCAG region. This cooperative planning shall occur during as part of SCAG's ongoing regional planning efforts.	distribution is a cumulatively considerable contribution to this **significant** impact.			
Cumulative Impact 3.15-5: Urbanization in the SCAG region will increase substantially by 2035. The 2008 RTP, by increasing mobility and by inclusion of land-use-transportation measures, influences the pattern of this urbanization. The 2008 RTP's influence on growth would contribute to the conversion of undeveloped land to urban uses, resulting in impacts to stormwater infiltration and groundwater recharge.	Mitigation Measures W.10 through W.13 shall be applied to all urban development projects, as feasible, in addition to the following measure: **MM-W.25:** SCAG shall continue to work with local jurisdictions and water agencies, to encourage regional-scale planning for improved stormwater management and groundwater recharge. Future adverse impacts shall be avoided through cooperative planning, information sharing, and comprehensive implementation efforts within the SCAG region. Meetings of SCAG's Water Policy Task Force and Regional Council offer an opportunity for local jurisdictions and water agencies to share information and strategies for improving regional performance in these efforts.	The urban development expected by 2035 would potentially affect stormwater infiltration and groundwater recharge. Future planning and implementation efforts may reduce the significance of this impact. However, given current conditions, the 2008 RTP's cumulative effects on stormwater infiltration and groundwater recharge would contribute to a **significant** impact on regional water resources.	S+	S+	S-

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Cumulative Impact 3.15-6: Urbanization in the SCAG region will increase substantially by 2035. The 2008 RTP, by increasing mobility and including land-use-transportation measures, influences the pattern of this urbanization. The 2008 RTP's influence on growth would contribute to the conversion of undeveloped land to urban uses, resulting in flooding hazard impacts.	Mitigation Measures W.14 through W.19 shall be applied to all urban development projects, as feasible, in addition to the following measure: **MM-W.26:** Local governments should prevent development in flood hazard areas that do not have appropriate protections, especially in alluvial fan areas of the region.	Urban development expected by 2035 would potentially result in additional structures in areas with flood hazards. Future planning efforts may reduce the significance of this impact; however, to assume that all flood hazards would be avoided would be speculative. The 2008 RTP's effect on population distribution and its associated contribution to the impact of flooding hazards is **significant**.	S+	S+	S-
Cumulative Impact 3.15-7: Urbanization in the SCAG region will increase substantially by 2035. The 2008 RTP, by increasing mobility and by including land-use-transportation measures, influences the pattern of this urbanization. The 2008 RTP's influence on growth would contribute to the need for increased wastewater treatment capacity in the region by 2035. The proposed Plan influences population growth, resulting in an indirect and cumulative impact on wastewater treatment services.	**MM-W.27:** Local jurisdictions should encourage new development and industry to locate in those service areas with existing wastewater infrastructure and treatment capacity, making greater use of those facilities prior to incurring new infrastructure costs. **MM-W.28:** Wastewater treatment agencies are encouraged to have expansion plans, approvals and financing in place once their facilities are operating at 80 percent of capacity. SCAG shall provide opportunities for information sharing and program development. **MM-W.29:** Local jurisdictions should promote reduced wastewater system demand by: • designing wastewater systems to minimize inflow and increase upstream treatment and infiltration to the extent feasible, • reducing overall source water generation by domestic and industrial users, • deferring development approvals for industries that	The mitigation measures would lessen the impacts on wastewater treatment capacity in the region; however, they are not expected to prevent an imbalance between the demand for regional capacity and existing regional capacity. The 2008 RTP would make a cumulatively considerable contribution to this **significant** impact.	S=	S=	S+

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		generate high volumes of wastewater until wastewater agencies have expanded capacity.				
Cumulative Impact 3.15-8: Urbanization in the SCAG region will increase substantially by 2035. The 2008 RTP, by increasing mobility and by inclusion of land-use-transportation measures, influences the pattern of this urbanization. The 2008 RTP's influence on growth would contribute to an increased demand for water supply and its associated infrastructure. Water agencies in the SCAG region produce many long-range planning studies to provide a system adequate to supply water demand, however the *existing* water supplies and infrastructure would not be sufficient to meet the expected demand in 2035.	**MM-W.30:**	Project developers and agencies should consider potential climate change hydrology and attendant impacts on available water supplies and reliability in the process of creating or modifying systems to manage water resources for both year-round use and ecosystem health.	Full implementation of these water supply mitigation measures may provide an adequate and reliable future water supply and infrastructure. The various water agencies update their Urban Water Management Plans to ensure that planning for the water needs of future growth is accommodated in a timely manner. However, CEQA requires the determination of significance to be based on a comparison between *existing* water supply and infrastructure and expected future demand. Although ensuring a reliable water supply for urban and other water demands in 2035 may be possible, the current, existing water supply and infrastructure would not be able to support the population in the Plan in 2035, and the specific, detailed solutions necessary	S=	S=	S=
	MM-W.31:	Local water agencies should continue to evaluate future water demands and establish the necessary supply and infrastructure to meet that demand, as documented in their Urban Water Management Plans.				
	MM-W.32:	Developers, local governments, and water agencies should include conjunctive use as a water management strategy when feasible.				
	MM-W.33:	SCAG shall encourage the kind of regional coordination throughout California and the Colorado River Basin that develops and supports sustainable policies in accommodating growth.				
	MM-W.34:	SCAG shall facilitate information sharing about the management and status of the Sacramento River Delta, the Colorado River Basin, and other water supply source areas of importance to local water supply.				
	MM-W.35:	Developers and local governments should reduce exterior uses of water in public areas, and should promote reductions in private homes and businesses, by shifting to drought-tolerant native landscape plantings (xeriscaping), using weather-based irrigation systems, educating other public agencies about water use, and installing related water pricing incentives.				
	MM-W.36:	Future impacts to water supply shall be minimized through cooperation, information sharing, and program development as part of SCAG's ongoing regional planning efforts. SCAG's Water Policy Task Force presents an opportunity for local jurisdictions and water agencies to share information and strategies (such as those listed above) about their on-going water supply planning efforts, including the following types of actions: • Minimize impacts to water supply by developing incentives, education and policies to further encourage water conservation and thereby reduce demand. • Involve the region's water supply agencies in planning efforts in order to make water resource information, such as water supply and water quality, location of recharge				

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	areas and groundwater, and other useful information available to local jurisdictions for use in their land use planning and decisions. • Provide, as appropriate, legislative support and advocacy of regional water conservation, supply and water quality projects. • Promote water-efficient land use development. • The Water Policy Task Force and other ongoing regional planning efforts present an opportunity for SCAG to partner with the region's water agencies in outreaching to local governments, special water districts, and the California Department of Water Resources on important water supply issues. SCAG provides a unique opportunity to increase two-way communication between land use and water planners. The goals of the Task Force would not be to duplicate existing efforts of the water agencies.	to assure adequate water supply in 2035 have not yet been developed. Through its influence on regional growth, the 2008 RTP would make a cumulatively considerable contribution to this **significant** impact.			

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